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Lectures
on the
Materia Medica
by
A. Kuhn M.D.
Medecinæ Theoriæ Praxeosque Professore

MDCCXC

Philadelphiæ

Lect 12th

Lichen Fixidatus or Cup-Moss grows upon all barren Rocks & Mountains in America & Europe. I have set it down on the authority of Dr Willis a Man of great practical Knowledge but on account of his exploded Theories ill studied than he deserves. He recommends it in the Whooping or Chin Cough a disease which he says the Physician seldom the old Woman often succeeds in. The remedy which they generally make use of is the Cup Moss which is a simple Astringent without either Smell or Taste & on this account we can make the Children more readily take a sufficient quantity of it than of the Peruvian Bark which is recommended in this Case by Dr Burton. Other Astringents have also been recommended. The Chin Cough was first probably imported from Asia & Africa as the Small Pox & Measles were. Like these Disorders it attacks only those Children & Persons who never had it before. It was not known in France before the year 1764. It cannot be owing to any Acrimony of y humors as it then would have been known in Europe from the earliest Ages. The great Quantities of

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thick yellow Phlegm that are vomited & coughed up are to be considered rather as the consequence than as the cause of the Disorder, besides it is often epidemical & manifestly contagious. It has this in comon with some other contagious Disorders that a person who has at any time of his life been afflicted with this Disorder need never dread a second Attack. Of the truth of this I was assured by a Gentleman who in a course of 32 years extensive practice never met with a person who had had this disorder twice. A common Catarh has been often mistaken for a chin cough but may be distinguished from it by attending to the following History. The Chin Cough is sometimes attended with a fever sometimes not. It comes on gradually & is worse every other day. It is at first dry but after 10 or 12 days an Expectoration of yellow Phlegm ensues. After this the Disorder encreases. In the fit the Eyes swim in Tears, Blood often gushes from the Nose. It continues untill a Vomiting arises. If the fit should go off without this vomiting it will return with repeated Violence. If the child is seized with a fit of Coughing after Dinner it becomes black in the face, falls to the ground

is in Danger of immediate Suffocation unless a Vomiting is excited by putting a finger down its throat or otherwise irritating the Uvula. A child in this disorder should never be left without an attendant for when the fit seizes it unless it can lay hold of a Table or something else to support itself it falls to the ground & may receive considerable Injury & is also in danger of Suffocation before Assistance can be had. —

As the Cause of this Disease is a contagious Miasma we have hitherto discovered nothing by which we can prevent or cure the Disorder All we can do is to palliate it & alleviate the Symptoms. When left to itself it will continue 8 or 12 Weeks & even sometimes 6 months & in this Case the child is generally thrown into other Disorders which prove fatal Some are carried off by a Hectic fever others by a Spitting & vomiting of blood. —

This Disorder is manifestly of a Spasmodic & convulsive Nature. If the child is plethoric or of a robust habit of body we may take away some blood Emetics may be given on those Days on which they find themselves better. In the Be-

4 ginning we may employ Musk Camphor & other Antispasmodics. When the Inflammatory Symptoms are gone & the disease become regular we may give the bark or if the child will not take it a 2. S of Sup Mofs or any other Vegetable Astringent. If this Method does not succeed a change of air may be necessary & it has happened that the Disease has been cured by changing the air even for the worse. All the unripe & naturally acerb fruits may be reckoned Astringents. The virtues of all are nearly the same, we may therefore consult plenty & cheapness.

Prunus Sylvestris or Common Sloe is perhaps equal to any other. The best method of preparing it is by making a Rob like Elder Rob. In the Dysentery such Medicines may be employed with Advantage as are moderately astringent & at the same time correct putrefaction. The Sloe proves highly serviceable in this disorder. By its Astringency it restores Tone to the Intestines, it likewise corrects & obviates the Tendency to putrefaction. As all acerb fruits are not so liable to an active fermentation as others they will prove

less laxative & the Sloe is on this account very use-
ful. An Infusion of the leaves of Sloe has been
recommended as a Gargle in spongy and relaxed
Gums & to fix loose Teeth & also in Angina
when it is owing to Relaxation —
Berbery is a very excellent fruit of a grateful
astringent Taste. It may be given either in Juice
Syrup or Jelly. It is particularly indicated in
all Disorders owing to putrid or dissolved State
of the humours. Prosper Albinus an Italian Phy-
sician famous for many works particularly for
one "De prasagienda vita morte" was cured of a
malignant fever attended with a Bilious
Diarhaa when his life was despaired of by a
plentiful use of Barbery Syrup. Simon Pauli
another Physician was cured of a similar Di-
sease by the same Remedy. It is highly useful
in all fevers in Dysenteries & in Cholras at-
tended with Symptoms of putrescency. Van-
Swieten from his own Experience recommends
the inner bark of the tree as a powerful hydra-
gogue.

Succus Acacia & Hypocistis are Substan-

6
is now scarcely known to many Physicians even by Name. They are simple & pure Astringents & possess no Virtues to make them preferable to any others as also the Gum kind.

Terra Japonica. This is very improperly called an Earth. It is a vegetable inspissated Juice prepared from the Juice of the fruit of the Areka Palm Tree. It is prepared by boiling the fruit in Water & adding some Lime to it which gives it the red Color. The Liquor is poured off & the Faces or those parts which fall to the Bottom are dried & kept for use. Its principal use is in Laxity & Resolution of the Gums. It is chewed by the French Gentry to give them an agreable Breath. It may be used in Diarrhœas & some Dysenteries. It is a powerful Astringent of no Smell & rather of an agreable Taste. As to the Dose, it may be given in ℈ss to ℈j in Substance or Solution.

Sanguis Draconis has at all times been considered as a powerful astringent & has been thought very serviceable in checking Hæmorrhages, probably from its resembling blood

in Color. It is possessed of no Astringency & is totally insoluble in the Fluids of our System and therefore does not deserve to be considered as a Medicine. The only Use I know for it is to form Alum into Pills after the Manner of Helvetius as I mentioned before.

Hypericum was formerly much esteemed in Medicine & still continues in Repute with the Vulgar, but is now totally banished from our Prescriptions. From its Taste it appears to be an Astringent. It contains a large Quantity of subtle essential Oil in little Cells like those in the Rind of Oranges &c. The plant is said to be a powerful Diuretic. The Oil is said to have proved very Useful in the Epileptic Cases & in Mania, tho' I must confess I cannot account for its Operation in these Cases.

Lysimachia D.r Haen assures us the Van Swieten & himself have experienced the good Effects of this in the Dysentery in the Dose of ʒ j Morning & Evening. He says it cured a recent Dysentery in 3 Days & an old one in three Weeks. He used it principally in the Chronic Dysentery. With Regard to the Use of Astringents in Dysenteries Physicians ar not

agreed

agreed. This difference of Opinion seems to have arisen from their confounding the Chronic and Acute Dysenteries which are very different Disorders. The Acute Dysentery is always attended with Fever the Chronic is not, tho' sometimes there is a Symptomatic Fever but this is rarely the Case. The Acute generally lasts no longer than a Week or Fortnight & sometimes not so long. It is attended with great Pain & evident Signs of Putrescency in the Bowells. The Chronic lasts for many Months without much Pain or any evident Signs of Putrescency. The two Disorders are to be treated in a very different Manner. The Acute is to be considered as a Febris Intro, versa, as Sydenham terms it & is to be treated as a putrid Malignant Feber by Antiseptics, diluent & Acid Drinks, gentle Laxatives & Anodynes at Night. There is no danger in giving Anodynes in this Disorder which greatly relieve the Pain & Tenesmus and

cause

cause a gentle Evacuation by the Skin which is of great Service in this Disorder.

To increase the Dyaphoretic Virtues we may combine it with Ipecac: or Tart Emetic for we shall find hereafter that Emetics combined with Opiates are the most powerful Sudorifics. I have seen Dysenteries cured by no other Remedies than Opiates at Night & some Laxative in the Morning. In a Chronic Dysentery we should likewise endeavour to produce a determination of the Fluids to the Surface for without this all other Attempts will be vain. In this Anodyne are hurtful as they weaken & relax the Intestines already too much debilitated. Gentle Astringents combined with gentle Purgatives are very serviceable by restoring the Tone of the Intestines & by evacuating the morbid Matter. Ipicacuana alone in small Doses has been found of great Service. It has combined with its Emetic qualities a manifest Astringency. In the Acute Dysentery Astringents are hurtful, in the Chronic they are Serviceable. In this Manner we may

10 ~~In the Chronic they are serviceable In this manner~~ in some measure reconcile the different & jarring Opinions of Physicians on this head.

Plantago is a very weak astringent In decoction the Plantane has been employed in hamorrhages & Dr Clark formerly a physician of great eminence at Edinburgh assures us that he has seen hamorrhages suppress by this which would not yield to seemingly more powerful Remedies. An Infusion of the leaves has been recommended in the fluor albus Celsus recommends a decoction of the leaves for consumptions & Dr Shultz of Halle confirms this Opinion. Mr Boyle tells us that he has seen Consumptions cured by 2 Spoonsful of the expressed Juice of the Plantane taken every morning for 2 months. I know not to what property to ascribe its effects in this case.

In this Country the plantane is used for the bite of the Rattle Snake & other Serpents. With regard to the bites of Serpents from all the information I could get on this Subject it appears that if the bite is inflicted immediately into the Vein so

that the Poison is conveyed immediately into the Blood, there are no hopes for a cure. But if it is inflicted into a muscular part so that it must be taken up by the Absorbents before it can be mixed with the blood there is no great danger. Warm Fomentations of all kinds even warm water alone will answer equally well. Drinking warm liquors of all kinds by keeping up a perspiration will also prove serviceable. The Sentiments of Mr Carver who remained a long time among the Indians, on this head are very similar to what I have given. The danger consists entirely in the mixture of the blood with the Venom. Poison of Serpents taken into the Stomach produces no effects fatal. Mr Phidi tells us that a Number of Gentlemen had met to make some Experiments on the Venom of the Viper & had for this purpose collected a Quantity of it in a Glass. To the amazement of the Company one of them drank off the poison but they were much more amazed when they found he experienced no Inconvenience from it. The People of Asia & Africa when can they

are bitten by a Serpent apply immediately to some one to suck the wound & the person who does this Office never feels any Inconvenience from it unless there is an Ulcer in the Mouth by which the poison may be readily conveyed into the Blood.

Polygonatum. The flowers, leaves & berries of this are of a very acrid & even poisonous Nature. The Root is remarkable mucilaginous with its astringency. It has been used with Succes in haemorrhoidal Swellings & Bleedings. The Dose is ℥ss boiled in a pint of Milk untill half is consumed & taken at once in the evening. With Regard to the Use of Astringents in haemorrhoidal Cases when they are critical. They are undoubtedly improper. Some have even Supposed that the haemorrhoids are a natural Evacuation answering the same Ends in Men as the Menses in Women. This however is not the Case for we see as many if not more Woman afflicted with haemorrhoidal discharges as Men & some Woman are troubled with the piles during the flow of the Menses.

When they are critical or have become habitual to the System they are to be considered as a necessary evil but at their first appearance they are certainly morbid. They are frequently occasioned by a habit of Costiveness by which the free Return of the blood to the heart is prevented & is poured out into the cellular membrane & form Ecchymoses which are kept up by Laxity. Here, after we have removed the Costiveness Astringents will be very proper. When the Disorder has become habitual it will be dangerous to check it & therefore Astringents during or immediately before the Evacuation will be hurtful, but even here I can see no great Inconvenience from a moderate use of Astringents after the Discharge has ceased, to prevent its Return. —

Semperviveum or House Leek is a moderate Astringent combined with a mucilaginous quality. Boerhaave says that ℥ß of the expressed juice & drank at once will frequently cure a Dysentery. Boyle recommends it mixed with honey in the Aphtha in Children. It is said to be useful in Inflammation of the Mouth & Fauces. A poultice of the

Leaves

Leaves is in great Repute with the Vulgar for Burns & Scalds. The Expressed Juice in the Philosophical Transactions of Breslau is recommended to take off Films of the Eyes. A Poultice of the Leaves is used for the Cure of Corns. Acrid Applications of all kinds to Corns are highly improper. We know nothing that will effect a Cure but such Applications as by mollifying the neighbouring Parts will dispose the Corns to fall out.

Nettles when young are employed in Food. A strong decoction of them is said to Cure the Piles. The Infusion of the Leaves is employed in Consumption. The Juice has been recommended in Haemaptoe. From their remarkable property of exciting Inflamation & Burning in every Part upon which they are struck they have been employed in Torpor & Paralytic Affections of the Limbs. Here they act by exciting the Animal Fibres into Action & by producing a greater Derivation of Blood & Nervous influence into the Part. This is termed Urticatio. When we examine the Plant carefully we find that it is covered with little sharp Points which when

struck

struck against any Object, breaks & a Fluid is at the same time spouted out into the Wound which produces the Inflamation

Viscus Quernus or Mistetoe. Much Superstition has been mixed with the Use of this Medicine It has been thought a Specific in the Epilepsy. When Epilepsy proceeds from Relaxation allowing the Affection to recur upon slight occasion, Causes Astringents are certainly useful. It has a Bitterness joined with its Astringency & may be serviceable where that is wanting. It is immaterial as to the plant from which it is taken This showes that plants do not differ so much from the Juice they take in as from the different Assimilatory Organs. Its Virtues reside in the Bark. It is best employed in substance in the Dose of ℥ss vel ℥j.

Lecture 13th.

Uva Ursi a Species of Arbutus, this has of late been much recommended in Calcular Concretions & other Disorders of the Kidneys & Bladder. It was first recommended by Linnaeus, after him several Trials were made by D.r Haen in the public Hospital at Vienna an Acco.t of which he has given in his Ratio Medendi to which I refer you. D.r Haen found that it does not dissolve the Stone but mitigates the pain arising from it, enables the Patient to retain his Urine & changes the bad State of this Fluid. Frequently when it was fœtid, purulent, acrid & so highly Alkalescent as to change the Syrup of Violets Green & effervesce with Acids, by the Use of this Remedy it was brought back to its natural State & made to deposit a healthy Sediment. He says also that it cured all Suppurations of the Urinary Passages whether of the Kidneys Ureters Bladder Ure. thra Scrotum or Perinæum provided they were not Veneral, for in this Case Nothing but Mercury will succeed. It relieves the pains attending the

Stone

Stone, tho' it appears by sounding that the Stone is not changed either in Size or Shape. It is often Servi-ceable where Lythotomy can not be performed. — D.r Haen gives us the Case of a Gentleman 30 Years of Age afflicted with the Stone who was intirely relieved of all the Symptoms by the Use of this Remedy. He likewise gives us a Case where the Gentleman was cut but the Stone could not be extracted: By the Use of the Uva Ursi the Patients life was rendered comfortable. The Method in which D.r Haen exhi-bited this Medicine you will see best from the follow-ing Case. A Lad of about 11 Years of Age was brought into the Hospital at Vienna who for 4 Years had been afflicted with intense pain in making Water & during that Time had voided two Stones each the Size of a Pea. Upon sounding a Calculus was evi-dently felt he was put upon the Uva Ursie of which he took ℥ss Morning & Evening & an Anodyne at Night. In four days his Symptoms were greatly relieved & in a Month he was discharged quite free from pain. He continued well for several Months but neglecting the Use of his Medicine & using im-proper Diet he had a Return of his Complaints

and

and was brought to the Hospital a second Time. Here while every Thing was preparing for the Operation he took Ʒss three times a Day. In three Days the pains were intirely gone. Upon sounding him the Calculus was evidently heard & felt. In a fort Night he was again discharged. He returned into the Hospital a ~~fourth~~ third time & Recourse was had again to the Uva Ursi but as his pains were now more violent than they ever before had been Linseed Oil was injected into the Bladder daily. After some days when his Pains were abated the Injection of Oil was omitted & the Uva Ursi in powder was given him daily.

The State of the Urine was always changed upon using the Uva Ursi. I am inclined to believe that the Symptoms attending the Stone are not owing to its Size Shape Weight &c. but depend intirely on the State of the Urine. We frequently find persons afflicted with all the Symptoms of the Stone when no Calculus can be found in the Kidneys or Bladder & on the contrary we often upon Discition find Calculi of considerable Magnitude in Persons who during Life felt no Inconvenience.

If the pains depended intirely upon the Stones

why should there in the latter Case be no Inconvenience
felt or whence in the former do the pains arise. When
the Urine is fetid, purulent, Acrid or Alkaline the Uva
Ursi is often found very useful by bringing it back
to its natural State. It acts probably by giving Tone
to the Secretory Organ & enabling it to secrete a healthy
Fluid. In all Ages have Astringents been recommended
for the Cure of the Stone & it is probable that even
Lime water acts more by its Astringency than by
any Power it has of dissolving the Stone. Lime water
frequently relieves the Symptoms without changing
the Stone. This appears evident in Mr. Walpole who
published his own Case. He was intirely freed from
pain by the Use of Lime Water. Upon Dissection
after his Death a Calculus of Considerable Magni-
tude was found in his Bladder. I am well aware
that it is said that since Water communicates to
the Urine of Persons who drink it a Power of dissol-
ving Stones out of the Body. But the Urine of Cal-
culus Patients will often do the same altho' they
do not drink Lime Water & yet the Stone is not
found dissolved & we are not rashly to conclude from
Experiments made out of the Body that the same Effects
will take place within it.

From some Experiments lately made at Edin^{r} burgh it appears, that when the Uva Ursi was added to the Urine in which was a Calculus, the Calculus was ~~somewhat~~ increased, but when the Acid of Vitriol was added it diminished.

I have seen the Uva Ursi tried in three Cases The first was a Child afflicted with the Stone. The Uva Ursi was advised & was used without Success. The Stone was afterwards extracted by Lythotomy.

The second was a Gentleman 80 Years of Age who had been troubled with several Nephritic Paroxysms wheter from a Calculus was not certain. As he had no Desire to be convinced of such disagreeable Truth, the only Method of ascertaining this sounding was not employed. He was advised ~~to~~ to Use ~~of~~ the Uva Ursi in a strong Infusion. In 24 Hours after, he began to use this Remedy his Pains were considerably abated & he was convinced that it was of great Service to him. It did not however intirely free him of his Complaints & he continued subject to repeated attacks during the short remainder of his Life

The third Case was a young Gentleman of 24 Years of Age who had been troubled with Nephritic Paroxysms. The Uva Ursi was employed, but

instead

instead of mitigating it encreased his pains. Thus in two cases out of three the Medicine proved quite ineffectual. Eben De Haen's case is ambiguous for we find that the disorder was always relieved soon after he came into the hospital & returned soon after he left it. In the Hospital a very strict Regimen was no doubt observed & this might contribute as much to the relief which was afforded as the Medicine.

Cortex Granatorum et Querci are strong & simple astringents. As the Oak bark is strong & easily procured we may use it in external applications as in the Procidentia ani in Children. We should always apply it cold for when used warm it will relax as much by its warmth on the one hand as the medicine will brace & astringe on the other. An Infusion of the Pomegranate flowers gives an agreeable gargle in relaxation of the Uvula.

Cortex Simarouba is the Bark of a Tree growing in Guiana where it is accounted a Specific for the Dysentery. It was first brought from thence to Europe in 1713. It was employed

in France in 1718 for the Dysentery which was their Epidemic. It excites a Vomiting Nausea & Diaphoresis & is of use principally in Chronic Dysenteries. The Dose is ℥ij boiled in a quart of Water intill ⅓ are evaporated the Remainder to be divided into 4 doses one of which is to be taken every 3 or 4 hours. ℥ß of the powder is also a Dose. It is possessed of no Astringency but its Virtues are entirely owing to its Sudorific Quality by which it strongly determines the Fluids to the Skin which we know to be of great Consequence in the Cure of Dysentery I have used it several times particularly in one Case at the Pennsylvania Hospital. A Man had been afflicted with a Dysentery several Months & different Medicines had been prescribed by the different Physicians of that Institution to no purpose. At last prescribed the Simarouba & in 3 or 4 Weeks he was discharged perfectly cured

Logwood is a weak Astringent insoluble in the fluids either in Decoction or Extract. It is in every Respect much inferior to other Astringents hence it is with Propriety rejected.

Galls are powerful Astringents. They give out their Astringency in Solution more than any other Astringent of the Vegetable Kind. They are proper in the Procidentia ani in children & mixed with Hog's Lard are useful in the piles. In the procidentia ani we use the same Medicine to prevent its return. I have seen Galls & Gentian effectual in curing Intermittents when the Bark had failed.

Fungus Militensis is a Substance not known in our Shops. Linnæus wrote a Treatise on it in which he recommends it in hæmorrhages of all kinds particularly those of the Uterus. It grows in the Island of Malta where a constant Guard is kept over it lest some Person more attentive to his own than the Public Good should engross or destroy it. It was thought peculiar to this Island but it has been found in Jamaica & Dr Brown mentions it in his Natural History of that Island. It is recommended in all kinds of hæmorrhages from ℈j to ℈ij in a Dose to be repeated at proper Intervals untill the Effect is produced.

I have now finished the consideration of

The particular Astringents I shall in the next place mention some general Terms comprehending those Substances which tho not really astringent may occasionally prove so.

Acids. Applied to the Tongue they contract and corrugate the parts & deprives the Lips of their red Color. The Virtues of Fosil Acids are similar & differ only in Degree of Concentration there is a difference between the Vegetable & Fosil Acids. The former are liable to ferment in the prima viæ & to have their acid nature changd The fosil Acids being incapable of fermentation & even resisting this process are not liable to this change. They also stimulate the Organs of Secretion by which they produce more copious Excretions. This the Vegetable Acids cannot do unless they are given in very large Quantities. There is also a difference between the Vegetable Acids. The Native have both the Vinous & Acetous to go thro' & are therefore more liable to be changed than the fermented. The Fosil Acids are very proper in Hæmorrhages especially when attended with fever where the Metallic Astrin

gents from their Stimulus would prove hurtful being possessed of a sedative virtue by which they diminish the impetus of the fluids & at the same time contract the Solids.

Austere Wines act by their Acerbity. They are liable to the same Objections with the Native Vegetable Acids as they have generally undergone the Vinous Fermentation imperfectly & have still the Acetous to go through. By shewing them their Acerbity is encreased & they are less liable to ferment. They are however rather to be considered as a convenient Vehicle for Astringent Medicines than acting as such. When a Choice of Wine is to be made the Austere ~~are~~ are in some Cases to be preferred. Thus in the Dysentery where we want a weak antiseptic Fluid the red Wines are generally preferred & with Propriety but they do not here act as Astringents for when given in large Quantity they commonly prove Laxative.

Bitters when Evacuations depend on Relaxation by giving a Temporary Tone to the parts act as Astringents

Sedatives may act as Astringents in stopping Evacuations by diminishing the Impetus of the Fluids & by taking off Spasm & Irritation when they are owing to these Causes.

Balsamics have been reckoned Astringents from their Use in increased Discharge of Urinary Passages as Gleets Gonorrhœas &c when given in large Doses they prove Laxative & when we come to consider this Class of Medicine more particularly we shall find that they can not with the least propriety be considered as Astringents. I conceive they act in stopping Gleets &c. much in the same Manner as Cantharides by exiting an Inflamation in the Urinary Passages to which they have a natural Tendency & thus producing a Constriction of the relaxed Glands—

Exsiccants have been confounded with Astringents they are not however by any Means Astringent. By this Term we mean such Substances as absorb Moisture. For this Purpose any dry insipid Powder may be employed. Powder'd Chalk Boles Clay are generally us'd— Oat Meal will perhaps answer better than any of them. Exsiccants may be employed when Perspiration is so encreased as to become disagreeable. Here it would be improper & even dangerous to check the Evacuation by Astringents but Exsiccants will remove the Disagreeableness without obstructing the Perspiration

tion. They are also employed in Erysipelas an Affection of the Rete Mucosum. Here they do not act as Astringents by repelling but by absorbing the Acrid Mucus which would otherwise cause the Disease to spread over the Neighbouring Parts. When this Disorder is confined to the Extremities there is not much Danger to be apprehended, but when it Attacks the Head Face or Breast it is often very dangerous. In it Repellents are not to be used lest they should throw the Disorder upon some of the Viscera & cause it to prove fatal. We may employ Exsiccants with advantage to absorb any Moisture & Oat meal is to be preferred as it is not so apt to harden & form Crusts as the Powders of Chalk &c. It should be employed upon Cloth

We have now finished the Consideration of Astringents & will in the next place take a short View of what has been said on that Subject in the preceeding Lectures.

We define the Astringents to be such Substances as increased the cohesion of the Fibres of our Bodies. We observed that their principal Action was upon the Nervous System by which their Effects were much further extended & much sooner produced than

than could possibly happen from the Circulation
We found that Astringents were indicated 1st
in Laxity of the Solida Simplicia, if this may
be called a Disease. This Rigidity are generally
Constitutional & out of the Reach of Medicines
tho' Diet & Exercise have some Influence upon
them. The greatest Stress was laid on Laxity
& Rigidity when every Thing was attempted
to be explained upon Mathematical Principles.
Boerhave improved the Theory & it continued
a long Time in Vogue. The Nervous System —
which may be termed the Soul of the Machine
was intirely neglected. Since we have begun
to study the Laws of the Animal Oeconomy
with more Accuracy we find that Laxity and
Rigidity are of very little Consequence & may
be intirely neglected. The only Morbid Cases
which occur to me at present are 1st from
the too long Applications of Emollients to
any Part 2dly in the Rickets were even the
Bones are found softened 3dly where the Parts
have been overstretched & the Tone destroyed.

This

This is illustrated in Caljut & other elastic Substances which being extended beyond their Elasticity will not contract to their former length when let go.—

2dly in Debility of the Solida Vita. This often occurs & may be brought on in a Moment as in a Month or even a Year.

3dly in increased Actions of the Solids when owing to Irritability or Mobility of the System —

4thly in increased Evacuations of Blood. The Causes of these may be referred under three Heads. 1st Debility of & Relaxation — 2nd Debility & Irritability & 3d Increased Action of the Heart & Arteries. In the former Cases Astringents are proper, in the last hurtful. We should always employ the least stimulating Astringents in Hæmorhages as Alum in Substance or Alum Whey which will often prove effectual when no other Remedy will. When we use Astringents to check Hæmorrhages that are dangerous we should employ the strong Fossile ones. When to prevent their Return the weak Vegetable are most proper in small Doses so as to bring on a gradual Constriction —

5thly In Ulcers to bring on that Degree of Inflamation which is necessary to the formation of good Pus. From their Virtues in healing Wounds they were termed Vulnararies by the Antients as they thought them

healed

possessed of a Specific Property — 6thly in Inflamation
This is often produced by Debility as well as Strength
of the Vessels. In the former Cases the Vessels do not
propell the Blood with sufficient Vigor it therefore
Stagnates & produces Inflamation. In the latter case
the Blood is forced into the Vessels not naturally
accommodated to receive it. Inflamations pro-
duced in these two different Methods are to be
treated in very opposite Manners. For Instance,
Inflamations of the Eyes are to be treated in a
very different Manner in the young & Vigorous
from those in the old & debil Stated. In the ~~first~~
Astringents are very proper, in the latter hurtful.
An Inflamation in the young & Vigorous tends
to suppuration, in the old to Gangrene. This
gives us a Reason why the Peripneumony is gene-
rally fatal in old People & requires different
treatment from that in young People.

As the stopping of Hæmorrhages bears so
considerable a Share in the use of Astringents
we shall in our next Lecture treat of Hæmorrhages.

Lecture 14th

of Hemorrhages

By the Term of Haemorrhage we mean an Evacuation of pure Blood from the Vessels of a living Body. Dr. Stahl & his Followers whom I formerly mentioned as the best Writers on this Subject have very properly divided Haemorrhages into Active & Passive.

The Passive are always owing to some external Cause producing a Rupture or Laceration of the Vessels & more properly come under the Notice of Surgery.

The Active are produced without any external Cause solely from increased Action of the Vessels. This increased Action is owing to some internal Cause.

The Active are divided into Ordinary & Extraordinary. The Ordinary are when Blood flows from a part usually subject to Haemorrhages, as the Nose, Lungs Uterus &c.

The Extraordinary when Blood flows from parts out of which it does not usually issue, as the Internal Angle of the Eye, Tip of the Finger, Ears &c.

The Active are also divided into Natural and Preternatural.

The Active ordinary Preternatural are always Morbid Affections & deserve accurate Attention.

Haemorrhages acquire different Names according to the part from which they issue. Thus it is called

Haemoptoe

Hæmoptoe when it issues from the Lungs; Vomitus Cruentus or Hæmatemesis from the Stomach; Hæmorrhois from the Vessels of that Name; Mictus Cruentis or Hæmaturia from the Urinary passages & Menorrhagia Gravidarum when from the Uterus during Pregnancy.

Persons of Sanguineous Temperament which is known by a florid Countenance, smooth Skin shining Redness of the Lips & Corners of the Eyes & pale Hair generally inclining to red are very subject to Hæmorrhages especially from the Lungs & hence they frequently die Consumptive.

Persons also of a Sanguineous Melancholic Temperament which is known by a Paleness of the Countenance Fulness or Distension of the Veins on the Surface of the Body & Hair inclining to Black are also subject to Hæmorrhages.

Persons also who live a very indolent high Life above Stairs are frequently troubled with them.

Such Persons also, as are troubled with watery Exudations of the Head when young are often seized with Hæmorrhages when old.

Particular Seasons contribute to Hæmorrhages thus they are most frequent about the Vernal & Autumnal Equinoxes. Hæmorrhages happen at

every

every Period of Life. This is an Observation as old as Hippocrates himself — Celsus & many others confirm it. They flow however from different parts according to the Time of Life & even the Sexes make some difference here. Thus Boys are more subject than Girls to Hæmorrhages of the Nose which seldom appear before the 12th or after the 18th Year. Hæmathoisis more frequently attacks Men than Woman. It generally appears from the 18th to 35 year & a Person who has passed that Period without being attacked with a spitting of Blood or any Symptoms of Consumption may be thought safe from these Disorders It is true a spitting of Blood & Consumption do sometimes make their first Appearance after this Period but then it is owing to some Extraordinary Circumstances.

Hæmatemesis or Vomiting of Blood more frequently occur in Woman & it sometimes arises from a Suppression of the Menses. This however is not always the Case for it sometimes appears when there is no Obstruction & even during the flow of the Menses. Pregnant Women are sometimes seized with a Vomiting of Blood

The Hæmorrhoids or Piles seldom appear before the first Vigor of the Body is gone off. They in general make their first Appearance not untill after the 36th Year. As a Melancholic Temperament conduces to Hæmorrhages & frequently brings on the Piles, Men in general being of a more serious Turn of Mind than Woman

are more subject to this Evacuation. Woman are sometimes troubled with the Piles during Pregnancy. This is owing to the gravid Uterus compressing the Abdominal Veins & preventing the free Return of the Blood to the Heart thro' them.

Of all the Active Hæmorrhages the Mictus Cruentus is the least frequent. It never attacks Woman & seldom Men before their grand Climacteric or the 60th Year. When it is owing to external Violence or Calculi in the Urinary Passages it is to be considered as a Passive Hæmorrhage. Woman are sometimes during Pregnancy subject to an Hæmorrhage from the Uterus. This is called — Menorrhagia Gravidarum which we shall consider more particularly hereafter.

A Hæmorrhage sometimes comes on suddenly but in general is preceded by the following Symptoms.

There is a Sense of Fulness & Tension & sometimes of Pain in the part from which the Hæmorrhage is to issue a Diminution of the natural Excretions, hence Costiveness, pale limpid Urine a dry Skin with evident Signs of diminished Perspiration & if the Person has any Ulcers they become pallid & discharge little or no Pus; a Lassitude & Aversion from Motion, Coldness of the Extremities

meties, Wind & Borborigmi in the Intestines; fright, ful Dreams during Sleep, Anxiety; a Sense of Chilliness or what is called Horripilatio; Pains in the Back & Loins & a Dimness of Sight— The Countenance becomes pale; there is an increase of Thirst & Heat & a quick strong Pulse. The Tension is increased — untill the Hæmorrhage breaks forth. Upon the Cessation of the Hæmorrhage all the Symptoms remit. Hæmorrhages frequently become Periodical & return sometimes after an Interval of a Day sometimes of a Month & sometimes of a Year & there are Instances of their returning at a longer Period.

The Predisposing Causes of Hæmorrhages are various as Hæmorrhages come on sometimes suddenly & are sometimes preceded by the Symptoms above enumerated we may in general refer the Antecedent Causes to two Heads —

1st Such Things as suddenly increase the Circulation as violent bodily Exercise, strong Impressions upon the Mind or upon the Organs of Sense immediately communicating with the Sensorium Commune, as great Light great Noise violent Passions of the Mind as Anger— external Heat, the hot Fit of a Fever — All these have been known to bring on an Hæmorrhage

2dly

2dly. A Topical Plethora, That this precedes almost every Hæmorrhage is evident from the Tension and Fulness It is owing to a Congestion of the Vessels — This Congestion may be brought on by a general Plethora of the System. The Causes of general Plethora may be referred to three Heads. —

1st. It is owing to an increase of Nourishment the Evacuations continuing the same. In this Case the Equilibrium that ought to be kept up between what is taken in & what is discharged from the Body is destroyed. To this Head we may refer a large Quantity of Animal Food especially if accompanied with an Indolent Life.

2dly Plethora is produced by a Diminution of the Excretions while the Nourishment continues the same. Under the former Head the Quantity, here the Quality is rather to be considered. This Animal Food being less Perspirable will be more apt to produce Plethora than the same Quantity of Vegetable Food & Oysters & Fish of all kinds being least Alcescent & least Perspirable will most readily occasion it. The flesh of young Animals will be more likely to produce Plethora than that of the full grown. A want of Exercise may likewise be referred under this Head, for without this the Fluids are not driven on with sufficient Strength & hence Congestions

tions are formed in the Vessels & Perspiration is checked. The Moisture of the Atmosphere checking Perspiration may likewise be considered as a Cause under this Head.

3dly A suppression of Evacuations. To this may be referred an advanced Period of Life, for then in Woman we find the Menses are suppressed & in Man the Evacuation by the Skin.

A Plethora is often produced by a Diminution of the Body as the loss of a Limb, for in this Case the Blood which was formerly carried into that Part is carried into others & hence we find Haemorrhages frequently happen after the loss of a Limb.

A Partial Plethora may be produced independent of a general Plethora from an increased Distribution of the Fluids to a particular Part. This may be owing to various Causes.—

1st. It may depend on the Growth of the Body. Thus in young Persons before Puberty we observe Haemorrhages most frequently from the Nose, arising from the Head ceasing to grow while the same Quantity of Blood is still derived into it. When they approach to their Acme, as the Vessels give more Resistance to the Blood a greater Quantity

city will be carried to the lungs which will be least able to make a resistance Hence Hamoptoe is most common at this period In young the Arterious in Old the Venous Plethora takes place. This arises from the different Strength of the Vessels at different Periods of Life. Dr Winteringham has observed that in young animals the Arteries are weak & lax but when the Animal grows older they become more rigid & are indued with greater Strength & hence propel the fluids into the Veins Hence it is that old People are more subject to the Piles. In old people the discharge by the Skin is in a manner totally suppressed & the fluids are carried in greater quantities to the Kidneys hence the discharge by urine is increased in old people & thus are frequently affected with a Hamaturia.

2dly The Situation & conformation of the Body may occasion an increased Distribution of the fluids to a particular part. Thus a wrong conformation of the Thorax which is known by high Shoulders, a long thin Neck, flat & narrow Chest is often attended with Congestions in the Lungs & hence Hamoptoe is frequently found in Persons of this Shape where the Lungs

are not so large as they ought to be & as the same quantity of fluids is carried thro them in a given Time. Congestions will be readily formed. A Sedentary life has been known to bring on the piles. Here the Circulation thro' the Veins of the Abdomen is not carried on with sufficient strength hence Congestions are formed about the anus. A Debility of a particular part will tend very much to produce Congestions in that part & consequently Hæmorrhages. For as the Vessels are weak & lax they will not be able to resist the Impetus of the Fluids & a greater quantity will be carried into that part. Hoffman very properly reckons an Atonia of the Vessels among the Occasional causes of the Piles. —

Dy. Local & partial Stimuli drive a greater quantity of fluids into the part to which they are applied than it naturally receives. Under this head Calculi in the urinary Passages may be reckoned. These we have already said sometimes produces Hæmaturia by lacerating the Vessels but they also produce this Discharge by driving a greater quantity of fluids into these parts. It is of some use to distinguish between these two cases which may be done by attending to the

Symptoms preceding the Hæmaturia in the latter Case. Hardened Fæces collected in the Rectum acting as a Stimulus often produce the piles. Hæmorrhages of the Uterus are sometimes occasioned by part of the placenta remaining & acting as a Stimulus after birth.—

4thly Substances taken into the body which have a particular Tendency to any part of the Viscera will produce a congestion in that part & consequently an hæmorrhage. Thus Aloetics frequently produce the piles. Strong acrid Diuretics as Terpentine, Cantharides often bring on bloody Urine & a discharge of blood from the Uterus during Pregnancy & of consequence Abortion. This they do merely from their Irritation in the Urinary passages being communicated to the neighbouring Uterus & not from any Specific as is commonly supposed. Emetics will often produce Vomitings of blood when strong & used frequently.

5thly An increased Action of any particular part will produce a greater determination of blood to that part. Thus we find that Hæmoptoe is frequently produced after a violent Ex-

ertion of the Lungs as Declaiming Singing &c Wo-
men who copulate too freely with Men are often af-
flicted with Hæmaturia.

6thly Suppresions of usual Evacuations will pro-
duce a greater determination to particular parts
hence Hæmorrhages are frequently produced by
checking the Perspiration & by astringent Appli-
cations & by stopping Sores. It has been common-
ly said that the Hæmorrhage in this case
was owing to the fluids which was formerly eva-
cuated by the Sore for instance being carried to
some other part & producing a Congestion there
but we often find that the quantity of matter
discharged by an Sore in 24 hours is so small
that it can have little Effect in this way. We
must therefore account for it from the Equilibri-
um which is so necessary to our body being
distroyed by the Suppresion of the Evacuation.

7thly Whatever prevents the free return of the
blood thro' the veins to the heart may cause con-
gestion by increasing a Determination of the
fluids to some particular part. Thus hardened

faces in the Rectum compressing the Veins often produce piles. In this way it can account for Hæmorrhages arising in different parts from Scirrhus Spleen or Liver.

8.thly Infarctions of the Viscera by preventing the same quantity of the fluids from being carried to the parts affected as naturally is carried thither will occasion Regurgitation the æquilibrium in the Distribution of the fluids will be distroyed & hence an increased Distribution to some particular part will be occasioned.

9.thly Lastly. Spasmodic Constriction of any part particularly of the Extremities will often produce an increased Determination of the Fluids to a particular part. Whatever therefore exites Spasm may occasion Hæmorrhages as Cold & Moisture of the Atmosphere, distressing Sensations of the Mind which we know exites Spasms Sorrow &c. often occasion the piles

Habit has a great Share in continuing Hæmorrhages. How this happens is to us a Mystery but we know that Habit has a great Influence upon many Disorders as well as these

We now come to the Proximate Cause of Hæmorrhages. They are produced by Ruptures of the Vessels or their

their Anastomoses. These Ruptures may be occasioned

1st By an increased Circulation

2dly By Topical Plethora

How a Topical Plethora can produce the Symptoms preceding Hemorrhages it is difficult to determine All that I can advance upon this Subject is but Conjecture It is of no great Consequence whether it is true or false as it does not interfere with Facts & it will at least serve to show that when Physicians agree in Facts their Speculations are at least harmless. The finer a Web is spun the more easily it is broken & this is to be said in Favor of Subtle Theories that many do not understand them. When Nature perceives any part to be oppressed with an over Proportion of Fluids she will endeavour to remedy this & to remove it, if she fails in her Attempt the Hæmorrhage will certainly ensue.

We are now to say a few Words on the Cure of Hæmorrhages.

Independent of the Cause the Cure of Hæmorrhage turns upon three points or Indications.

1st To diminish the Action of the Heart & Arteries & divert the Blood from Part. The first part ~~of the cure~~ the Indication is to be answered by the Antiphlogestic Method which consists in Bleeding gentle Laxatives cooling Drinks, a thin Spare Diet cold Air & Absence from Light & Noise & from every Thing which exites the Mind into Action.

44 For diverting the Blood from the Part we make Use of Diaphoretics combined with Opium, Draughts of Cold Water or Water impregnated with Acids, Glysters of pure cold Water, Blisters Cupping, Milkwarm Pediluvia will all tend to divert the Blood from the part

2dly To give Constriction to the Ruptured Vessels. &

3dly To prevent the Return of the Hamorrhage

For both these purposes Astringents are generally employed, These as were said before are were either Fossile or Vegetable. As the Fossil are more sudden & stronger in their Operation they are chiefly to be relied upon in any Emergency. Those more commonly used are the Preparations of Iron, Lead & Alum. Alum Whey D. Whyte found would stop Hamorrhages of Uteras when they would yield to no other Remedy. When an Hamorrhage is owing to an increased Action of Heart & Arteries Astringents should not be employed untill their Action is diminished When it is owing to Relaxation & Irritation — Astringents are properly employed. When it is owing to Irritation or Irritability we should combine Opium with our Astringents. Cold may act as an Astringent in Topical Applications.

Thus

Thus Cloths dipped in cold water or vinegar & applied to the head or private parts will often stop an hæmorrhage of the Nose. Astringents are also serviceable in external Applications. Thus an infusion of Oak or Peruvian bark is employed with advantage to stop an immoderate discharge of piles.

To prevent the Return of hæmorrhages the patients should take care to avoid the occasional causes. Bleeding has been recommended, but it should always be in small quantities. Topical bleeding may be very serviceable. To prevent the return we should always use the weaker vegetable astringents in small Doses.

Emollients come next in order which we shall treat of Gentlemen at our next Lecture.

Lecture 15th

Emollients.

These are such Substances as Relax the Rigidity of the Solids, diminish their Cohesion & introduce a larger Quantity of Fluid or Moisture – Hence they are indicated in Leanness, Dryness & Contraction & other Cases of this Kind & in Rigidity either of the Solida Simplicia or Viva. All Substances containing Oil, Water or Mucelage are Emollient & it is not of much Consequence which we employ. Warm Water will answer every Indication of Emollients. We are therefore to treat of the Hot Bath.

The Effects of this are not simply Emollient – It is also Antispasmodic. We shall consider its Effects in each of these Ways.

The Use of the warm Bath was introduced in the earliest Periods in warm Countries where it not only agreeable but necessary. In Greece & Rome it was so much employed as to become one of the most fashionable & expensive Articles of Luxury, there Physicians employed for the Preservation from & Cure of many Diseases. In the warmer Climates where it is so necessary

that

that the Perspiration should be kept up the daily Use of it is attended with considerable Advantage. Whether it will be productive of equally good Effects in the Colder Countries is doubtfull. It will perhaps not answer so well as in the warmer Climates, but in these there is no Doubt but it may be employed with considerable Advantages as a Medicine.

We are first to consider its Effects & Manner of Operation & then to infer its Utility in Diseases.

By the Hot Bath or Balneum Calidum Physicians mean a total Submission of the Body in warm Water. We are not to consider it in its limited Sense but are to extend it to the External Application of warm Water to the Body in what ever Manner by Submersion, Affusion Pedeluvia Fomentation, Vapour or Steam applied to the Body.

Baths maybe made of two different Kinds of Water, viz. Simple or Impregnated, & their Effects have been considered as different. We shall first treat of the Effects of Simple Water by which you will be able to understand those of the Impregnated & indeed the Effects of these differ very little from those of the Simple & we find that in those Cases where Impregnated Waters have been

particularly

particularly recommended Simple Water will answer equally well provided there is the same Heat.

The Effects of the Hot Bath depend upon Heat & Moisture as these are either applied.

We shall first consider the Effects of the Separately.

Water applied to the Skin dissolves the Mucus with which that part is naturally supplied & washes off all Uncleanness adhering to it — It opens & distends the Pores increases the Perspiration & hence prevents all Disorders arising from that obstruction. It takes off the Acrimony from the Skin which is often the Cause of Disease. These Effects may be produced by Water independent of Heat but it is evident they must be more considerable from warm Water than Cold. Its Effects however are not confined to the Surface of the Body. It penetrates the Scarf Skin or Cuticle & relaxed the Nerves or Nervous Expansion under it & by Sympathy these Effects are extended over the whole Body. It has been supposed to penetrate even the Skin & Muscles

Muscles & relax the Ligaments of the Articulations but we can perceive no Pores by which it can penetrate the Skin & even suppose it could pass this, it is not probable it would penetrate the Cellular Membrane extended under this almost over the whole Body & replete with Fat. We can perceive no Vessels on the Skin but the Ex & Inhalents. It may be taken up by the Inhalents & carried into the System & may there exert its relaxing Qualities, but we see that these Effects are produced in a very different Manner from what is supposed. By passing the Lymphatics it dilutes the Fluids washes away Acrimony in Lymphatic Glands & prevents Obstructions from being formed in those Parts. That the Water is taken up by the Lymphatics is proved by a Cure related by Dr Simson P. M. in the Univer. sity of St Andrews in Scotland. A young Man in a Fever attended with a Diarrhœa would not or could not drink altho' labouring under great Thirst. A warm Pedeluvium was ordered his Thirst was removed & a short time after he had taken

his

his Feet out of the Water he had a liquid Stool a little more colored than the Water in the Bath. The Effects of Heat upon the Body are very considerable. These Effects are proportioned according to the Degree of Heat employed. The common Degrees of Baths are from 80 to 112 of Fahrenheits Therm. If the heat is below 80° no considerable Effects can be produced — if above 112° it cannot be continued any Length of Time without occasioning Pain. Heat rarifies & expands the Fluids & mollifies the Solids. When a Degree of heat greater than that of the Atmosphere but less than that of our Body is applied to it, it produces an agreeable Sensation, it relaxes the Cuticle & Nerves expanded under it, it increases their Sensibility & by Sympathy with these its Effects are extended over the whole System. But if a Degree of heat greater than that of our Body or even less if it is continued a considerable Time proves a powerful Stimulus

Some Animals become Torpid & in a Manner dead when the Temperature of the Air is not

above

above a certain Degree ~~of Heat~~ & they may be recovered by applying a greater Degree of Heat — We may from this & many other Circumstances infer that the Mobility of the Nervous power depends in a great Measure upon Heat & that Heat is the principal Stimulus to the Animal Body. After a Person has remained some Time in the Hot Bath we find the Veins upon the Surface become turnid. This is owing to the Heat expanding the Fluids & relaxing the Solids. It is also owing to the stimulant Effects determining a greater Quantity of Fluids into the Veins

We are now to speak of the Diseases in which the Hot Bath is useful.

First by detergeing & preventing Lentors by washing away Acrimony & relaxing the Skin it takes off Obstructions & prevents Congestions from being formed there — hence it is serviceable in all Disorders of the Skin.

2dly As it increases the insensible Perspiration it will prevent & remove Diseases arising from obstructed Perspiration — I have repeatedly mentioned that

that Diarrhœas & Dysenteries, Vomiting, Colics &c. are frequently if not always owing to this Cause. It is of great Service in these Disorders. Many Disorders not owing to obstructed Perspiration are kept up by it. These it will prove Serviceable in by keeping up & promoting this Discharge. It is on this principle that it proves useful in Disorders arising from a vitiated State of the Humors as the Scurvy it is probable might be prevented by the Daily Use of warm Bath. Many Disorders which are owing to foreign Matters taken into the System which are again to be expelled by some Excretion the warm Bath by keeping up the perspiration will carry off these Miasmata — hence it is serviceable in all Contagious Disorders as Syphilis or Lues Venerea This Disorder altho' it is not cured by the warm Bath alone is much more readily cured by other Remedies when the warm Bath is daily employed hence it is very easily cured in Warm Climates & we succeed the best in the warm Seasons.

Altho' the Warm Bath produces these good Effects yet it is attended with this Disadvantage that it renders the Body more Susceptible of Cold & the Disorders arising from it — hence the daily Use

of

of it is much more proper in Warm Climates & even there it is dangerous to expose the Body to the Air immediately after bathing. Galen who practized in a warm Country said that after bathing, Cold is to be carefully avoided—

3dly The warm Bath takes off all Obstructions in the Skin & Cuticle & is therefore useful in Phlegmons & all kinds of Inflamation if we except one Species the Erysipelas which is attended with an Excretation of Acrid Mucus by which it is extended. This is to be treated with rather dry than Moist Applications as when treating of Escicants we mentioned.

4thly By increasing the Circulation of the Blood & the Influx of the Nervous Power it proves serviceable in Atrophy or Marasmus. On these Accounts also it maybe useful in partial Palsies or even in a Hemiphlegia when not owing to Congestion in the Brain.

5thly From its stimulant Effects & increasing the Circulation it proves hurtful in the deep seated Inflamations & hence we see why warm Fomentations so often increase the Rheumatism. As it extends its Effects over the whole System, the Warm Bath often

often proves serviceable in rigid Tendons & Liga ments & in Contortions. Here it acts by its re laxing Qualities. It often proves highly useful in Contractions of the Fingers & Toes by promo ting the Influx of the Nervous Power into the extensor Muscles & enables them to overcome the rigid Flexors. From promoting the Influx of the Nervous Power the warm Bath is often Usefull in Chronic Rheumatism which is frequently owing to a Debility in the Muscles in the part Affected.

6thly I mentioned formerly that the Consent of the Stomach was greater with no part of the Body than with the Surface. The warm Bath therefore frequently takes off Spasmodic Con striction of the Abdomen, particularly the Colic. In this Disorder when all other Remedies fail the Warm Bath proves the first of Medi cines & will give Relief if this is to be produced by Medicine—

7thly As there is a considerable Consent between the Skin & Kidneys the warm Bath proves serviceable in Spasms of the Organs.

Of Lentiones

Oftentimes a Stone is retained in the Ureters by means of Spasm & causing great Pain there, the Spasm is increased. The warm Bath by taking off this Spasm promotes the Expulsion of the Stone into the Bladder & thus removes the pain. From its Antispasmodic Virtues the warm Bath proves a most Efficacious Remedy in the Hysteric Hypochondriac Diseases. These are generally attended with Spasms in the Alimentary Canal for which we have found the warm Bath to be very serviceable. It indeed mitigates Spasm in every Part.

8thly The Effects are not confined to the Muscular parts of our Bodies – they are extended also to Vascular System. It is used in Fevers. We shall next treat of its Utility in these Cases.

It was much employed by the Antients for the Cure of Fevers. Among the Moderns Doctor Gilchrist strongly recommends & gives a Number of Cases annexed to a Treatise on the Use of Sea Voyages, in Consumptions in which it was employed with surprizing Advantage. It proves powerfully Emollient & highly Antispasmodic. It increases the insensible Perspiration – it takes off Spasm renders

the

the Circulation equable & causes a derivation of Fluids from the Head. Causes drowsiness & disposes to Sleep. Part of the Water being taken up by the Absorbents it will act both as a Diluent & Attenuant. Pedeluvia prove very serviceable when in Fevers there is a Topical Affection of the Brain with Delirium & subsultus Tendinum. They also prove serviceable where there is a Coldness of the Feet. This they relieve by increasing the Circulation, determining a greater quantity of Blood into them & keeping up the perspiration. In Fevers Persons sometimes void large quantities of pale limpid Urine. This is generally a Sign of approaching Delirium. This Symptom may be relieved & the Delirium prevented by bathing the Feet in warm Water. In this Case it has been common to cut up Animals alive & apply them to the Soals of the Feet. They act upon the same principles as warm Water & we ought always to give it the preference as it can be more readily procured & its Effects are more certain. This Practice

also

also favors of cruelty will be disagreeable to most Patients & therefore ought deservedly to be rejected. It is hurtful in all Inflamatory fevers & fevers attended with topical Inflamation as it proves a Stimulus under certain circumstances. The warm Bath is principally useful in fevers that are owing to or attended with Debility. It is particularly useful in nervous fevers where we want a moderate Stimulus combined with an Antispasmodic. After Child bearing Woman are often exceedingly restless & can get no Sleep. In this case Opium is generally given & we cannot in general employ a better Remedy but in some cases Opium increases instead of relieving. Here the warm bath generally succeeds. The Difficulty of applying the warm Bath is a great Obstacle to its use. It is generally applied to the lower extremities with propriety both for convenience & Advantage for the Spasm is generally stronger in the feet as they are the most remote from the heart. It may also be applied with more safety to the feet than to any other part We sometimes cannot employ Deliveries as our Patients cannot be moved. In this case we must use Fomentation The Method I generally advise

is as follows. All the Bed Linnen being removed the Patient is to be laid upon a Blanket & to be covered with one, two, or more according to the Temperature of the weather. Two small Blankets are to be at hand A Blanket is wrapped close round the Waist of the Patient to confine the heat; one of the small ones is to be dipped in water & with it the Patients Feet Legs & Thighs are to be fomented; when this becomes cold the other small Blanket is to be applied in the same manner & in this way we may continue the fomentation for half an hour hour or even longer without fatiguing the Patient.

As warm Pediluvia cause a Derivation from the head they are employed the face from the Small Pox. Care should be taken not to let our Patient sit too long in the water least by its Stimulus it should raise the pulse & quicken the Circulation & thus prove the means of producing a more plentiful Eruption. The patient should also avoid keeping his face over the bucket or other Vessel in which the Water is contained least the Vapor from the water should relax that part & produce a more plentiful Eruption

there than would otherwise have happened. By relaxing & taking off the rigidity & Tension of the part to which it is applied the warm bath will communicate its Effects to those parts with which it sympathizes. Hence warm Pedeluvia appear to be proper in cases of obstructed Menses & we find that they are employed with Success in this case & likewise to bring on a discharge of piles when they are suppressed. As the warm bath by its Stimulus determines a greater quantity of blood into the part to which it is applied it will take it off from the other parts. When there is too great a determination of blood to the head Warm Pedeluvia will take off this Determination & direct it to the feet hence it proves serviceable in Delirium Lethargy Apoplexy &c Many however have objected to their use in these Cases on Account of their Stimulus. This is a weak Objection for the Stimulant Effects are in general confined to the part to which the bath is applied & when applied to the feet these Effects are seldom or never extended over the System As some part of the Water is absorbed it will pass the Lymphatic Vessels & Glands, waste away Acrimony, dilute

Viscidity take off all Obstructions in & clean the Glands.

By a Bath made of Broth or other nourishing Substances Persons have been kept alive where Deglutition has been obstructed. The warm bath has of Late been introduced into more general use than formerly. The Abbé D'Auteroche a Gentleman of a truly philosophical Disposition in his Travels to Siberia observed that the Inhabitants of that Country made considerable use of the Warm Bath for the cure of all disorders arising from obstructed perspiration & with great Success & that the degree of heat was so great as to be almost incredible beyond what more civilized Nations had any Idea of. This put the Litrati in France upon making Experiments to determine the degree of heat the human frame was capable of bearing Drs Fordyce Blagden & Solander at London found that they could remain in a room heated to 210° of F. Therm. for 7 minutes without any bad Consequence following & that even 260° might be submitted to with tolerable Ease. In this heat Eggs were roasted & in 40 minutes

a Beef Stake was not only dressed but dried. These Observations show us that our Frame contrary to the Received Opinions of Boerhaave & others can sustain a much greater Degree of Heat than that which it is naturally of. They have also led to many curious Speculations concerning the Animal Oeconomy & have given Rise to an Opinion that our System has a Power of generating cold to obviate Effects of external Heat & vice versa. Besides these Speculations these Observations are of great Service in the Practice of Physic. By applying so great a Degree of Heat as we see can be employed without Disadvantage, many Disorders will yield more readily than they could formerly do. It is probable that all Disorders arising from obstructed Perspiration the Scropula & Lues Venerea will be more readily cured than they formerly were.

Two Observation which I now am to make tho they are not immediately connected with the warm Bath yet naturally enough arise from what has been said on that Head. The first proves the great Quantity of Water that the Absorbents take up when there is a Want of Moisture or Fluid in the System.

Some unfortunate Seamen who were necessitated to take to their Long Boat as the last Resource were almost dying for want of Water — when either by Accident or Design they throw themselves into the Sea & found that their almost unsufferable Sensation of Thirst was quickly removed & that the Evacuation of Urine was increased. They had Recourse to this Method several Times afterwards & always with the same Success. Dr. Franklin thought this of so much Consequence that he published a short Essay giving an Account of it that others in the like Situation might avail themselves of it.

The second was communicated to me by Dr. Shiell who was formerly in this City and who had experienced the Usefulness of this Application himself. He also recommended it to several others all of whom experienced its Utility. This Gentleman was subject to a most violent Head Ach for several Years which he had never been troubled with 'til his Recovery from a Malignant Fever which left a coldness of the Feet. As he was himself a Physician & in Practice he had Recourse to every Application

he had ever heard or read of but without Relief.
As he had been a Student under Dr. Cullen and
entertained an high Opinion of his ~~Abilities~~
Medical Abilities he went from Ireland to Edin-
burgh to consult him — all Dr. Cullen's Efforts to
relieve him were in Vain. He then tried the
most celebrated Physicians in London but un-
fortunately for him their Art proved ineffectual
He now gave up all hopes of Recovery & had nothing
to depend upon but Patience under his Sufferings
He was upon his Return home in this Situation
when he fell in with an old Friend one of his
Fellow Students at Edinburgh to whom he rela-
ted the Melancholy Detail of his Sufferings
& his hopeless State. His Friend advised him
to entertain better hopes & gave him Assurance
of Relief provided he would stay with him a
few Days & make Use of a Domestic Medicine
he would recommend to him and which he told
him would increase the perspiration in his Feet
This was the Summit of his Wishes he there-
fore complied with the Request of his Friend
& in four Days was relieved of the coldness of
his Feet & Head Ach. Bay Salt performed the

cure

The Salt is to be made dry before the Fire & then reduced to an impalpable Powder and quilted between woolen or Tow Cloths the thickness of the whole need not exceed that of a Crown piece. This is to be worn Day and Night applied directly to the Soles of the Feet. The Effects of it is to keep the Feet warm & in a gentle Perspiration. I have recommended it in several Cases & never Knew it fail to produce this Effect. In some the Moisture was so great as to induce them to change the Application twice a Day. If you recollect I told you when treating of Condiments how Powerful a Stimulus Salt is to the Animal Fibre, you are not to be at a loss in accounting for this Cure viz: by exciting a proper Determination of the Fluids to the Feet. I formerly mentioned the Use of Salt in Hæmorrhages & that it was the principal Remedy in Hæmoptysis. From this we should learn never to slight the Experience even of an old Woman. It is not always left for Physicians to make Discoveries in Medicine for the greatest part

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of our most Capital Remedies have been introduced into the Mat: Medica either by Chance or by Quacks & illiterate People.

We are next to treat of some particular Substances employed as Emollients. We observed that Emollients are such Substances as relax the Rigidity of the Solids, diminish their Cohesion & introduce a large Quantity of Moisture & that they were indicated in Leanness & Dryness, Contractions & other Disorders of this Kind. All Substances containing Mucilage, Oil or Water are Emollients. Warm Water will answer almost every Intention of Emollients & as I have been so very diffuse on that Head I shall have the fewer Observations to make concerning particular Substances.

Radix Althæa or Marsh Mallow Root deservedly holds the first place amongst the particular Emollients. It may be applied externally to Swellings & Inflamations as a poultice - we likewise use it internally. A Decoction or rather Infusion of ℥j of the Root in a pint of Water affords an excellent Remedy in Acrimony of the Fauces. This is also excellent in Chronic Dysenteries attended

ded with great Pains & griping where the Natu-
ral Mucus of the Intestines is generally abraded.
A Decoction of it is employed sometimes in Ne-
phritic Cases. The Decoction of it is also very ser-
viceable in violent Purgings occasioned by too
severe a Cathartic. The Root boiled in red Wine
affords an excellent Brush for the Teeth to pre-
serve them & keep them clean. The Root may
be given to Children to chew when teething and
it is much preferrable to the hard Substances
commonly given as it will yield to the Gums &
not injure them. The Mucilage applied exter-
nally will speedily remove the pain arising from
Blisters. The Decoction drank plentifully will
prevent the Strangury which is often consequent
upon the Use of Blisters. Internally it proves
very useful in Stragury Pleurisy & Tickling Cough.
Externally it is applied to mitigate Inflamation
maturate Abcesses, to Sheath Parts excoriated &
to remove pain.

Linseed may be employed in the same Cases
with the Althæa. Linseed Tea proves very service-
able in Ardor Urinæ, Nephritic pains, Coughs,
Pleurisies & all Inflamations. The Meal is some-

times

times employed in Poultices to relax, maturate & take off Pains. The Oil is not so apt to turn rancid as other Oils & is sometimes employed in emollient Glysters. It is also given internally.

Gum Arabic & Tragacanth posess nearly the same Virtues & indeed the Virtues of all the Emollients are so nearly alike that we must determine the Use of one in preference to another merely from Convenience. We in general for external Use employ the Farinacea & a Poultice of Bread & Milk is perhaps equal to any of the more compound and apparently more artful Preparations especially if a little Oil or Hogs Lard is added to keep it Moist & to prevent the Chops & Fisoures of the Skin which are often produced by the Application of Emollients.

We shall enter upon the Consideration of Stimulants Gentlemen at our next Lecture

Lecture 16th.

Stimulantia

These are such Substances as excite the Action of the moving Fibres & do not act on the dead Fibres Whatever excites Motion or Contraction in an Animal Fibre is a Stimulant. Stimulants are either direct or indirect. The indirect are those which act upon the Organs of Sense, by which a Sensation is formed in the Sensorium commune & by this a more Copious Determination of the Nervous Power into the whole or a particular part of the System is produced. The Direct are those as act immediately on the moving Fibres without the Intervention of the Sensorium Commune. Stimulants are divided into the Mechanical and Chemical. In the former the Operation depends upon & can be explained from the Figure. Thus a sharp knife may stimulate. Herein we know the Action are those in which the Operation depends upon some peculiar Property of the Body with which we are unacquainted. Thus Heat proves a powerful Stimulus but we can not tell upon what Property that Effect depends. Most of the Stimulants we employ

are

of the Chemical Kind for their Operation seldom depend upon their Figure or Construction.

The Operation of Stimulants is of two Kinds—

1st That which is common to the whole System and affects every Fibre indiscriminately. Thus a Knife will cut & stimulate every Fibre & many of the Saline Substances affect every Fibre indiscriminately.

2ndly That which is confined to some particular Part. Thus the Rays of Light affect only the Eyes, Sound, the Ears, Odors, the Nose & so of a Variety of other Stimulants. The Operation of Stimulants therefore appears to be confined to the Nervous System. This leads one to make a few Observations on the Nerves which I am the rather inclined to do as Dr. Monro after 30 Years attention to the Brains & Nerves has made some important Discoveries which throw great Light upon the Subject & which had escaped the Notice of all the Anatomists that went before him. I am not here to follow him in his Anatomical Descriptions which you undoubtedly will have in their proper place but am only to consider the Physiological Parts.

Monro observes that the Human Species have more Brain in proportion to their Size, than any other

other Animal. This is not the Case with the Nerves, for in the Human Species as well as in all other Animals the Size of the Nerves is in proportion to the Size of the Body. From this Fact he draws this Conclusion & I think with Reason that the Brain in Man is ~~most~~ not formed merely to afford Origin to the Nerves but is also the Seat of our Mind or reasoning Faculties. From some preternatural appearances where the Animal Functions were carried on when a Child was born with little or no Brain or where the Brain had been almost intirely destroyed by Disease he concludes that all the Nervous Energy is not derived from the Brain but that it is generally in every Part of the Body. He found also that the Pia Mater surrounds every Nerve to its ultimate Ramification & Termination & it is probable that it serves the same purpose to these that the Periostium does to the Bones. This Opinion of D^r. Monro's seems confirmed from this Circumstance that Insects are not furnished with a Brain — What in them bears a Resemblance to a Brain appearing rather to be the Origin of a Nerve than the Seat of Sens: Com

mune

Commune. From this we may Account with greater Satisfaction for many Circumstances than we formerly could do. Thus we know that a considerable Tone may be given to a Limb by a Stimulus applied to it as Friction. This was supposed to be owing to a greater Determination of the Nervous Power & Blood into the part being produced, but we can more readily account for it from the Generation of the Nervous Energy in the Limb. This however is not all for D.r Munro observes that there is a considerable Consent between the Nervous and Vascular Parts by which a greater Determination of the Fluids into the part is produced. This seems to be confirmed by a Fact mentioned by M.r Bell of Edinburgh in a late System of Surgery. In the Operation for the Aneurism where the principal Artery is tied tho' no Nerves included in the Ligature the parts below became cold & Torpid & their Sensibility was increased in Proportion as the Circulation in the lower Part became Considerable. D.r Monro found that the different Nerves formed Anastomoses by the Fibres of one combining with the Fibres of another from a different part by which Connections are formed between the different parts of the Body by

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the Nerves independant of the Brain. This is entirely new. Hence when a Nerve is injured or destroyed the Muscles in other parts to which it is distributed are not rendered entirely useless but retain some Share of Sensibility & Irritability from their Connections of Nerves. Dr Monro supposes that Ganglions are formed by the fibres of the Nerves mutually blending each giving & receiving fibres & that their use is to generate the Nervous Energy. This is also entirely new & even directly contrary to former Opinions. Dr Monro has also found that the Nerves towards their Determination run in a serpentine form like the Lines in the Palms of the Hands the use of which appears to be that they may more readily admit of Distension when the Muscles are in Action. From what has been said we may draw the following conclusions that many Disorders of the Nerves e.g. Partial Palsies, are entirely partial or Local & that they do not originate in the Sens. Comm. & hence that they may be cured by local Applications alone, that by the Anastomoses of

of the Nerves without the Intervention of the Sens: Comm: various Sympathies are formed in the Body. And may we not from a particular Attention to these Anastomoses expect to be able to account for the various Sympathies which take place & also to form new ones. These Observations will also I think tend to banish all the Metaphysical Reasoning which have of late become so very fashionable in Physic & to so little purpose. —

Stimulants are indicated wherever the motions of the System are inert languid weak & slow. Hence they are indicated where the motion of the blood is suddenly stopped as in faintings. They are also indicated where there is a Sluggishness & Stagnation of the humors as in Cachexy or Chlorosis likewise in Gangrenes when owing to an Hydropic. Adimatous or Dull State of the body. When Gangrene is owing to Inflamation & increased action of the Solids. Stimulants are hurtful but when it is owing to diminished Action of the Solids

They are very useful. They are also employed in Intermittents to prevent the return of the fit when given before the Accession. Stimulants are also indicated in Nervous Disorders particularly in Palsies. The Causes of Palsy are very various. There may be cases in which Stimulants may prove improper & hurtful but wherein Palsy is owing to a weakness & Inertia of the Nervous System Stimulants are highly useful. They are likewise indicated in Vertigo Lethargy Apoplexy & other disorders of this Kind.

Apoplexy has been divided into Sanguineous & Serous & the Application of Stimulants has been confined to the Latter. Some mention a third Species which they say is owing to an Inertia of the Nervous Power. Here Stimulants are undoubtedly proper but it is difficult to distinguish this Species from the others nor are we certain that this Species exists or that it is founded on practical Observation. In the Serous Apoplexy

Stimulants may be usefully applied externally at a distance from the head to occasion a Revulsion from it & this way they may be also serviceable in the Sanguineous Apoplexy, but as to their external Exhibition in either of these cases it appears to be attended with great uncertainty & I can have no Idea of its propriety. They are also indicated in particular Kinds of Head Ach those that are attended with Paleness, Coldness & Langour of the whole Body especially when they are of a Nervous Nature. But when Headach is of a Rheumatic Kind or is owing to Inflamation Stimulants are improper. When the pain is without the Cranium Blisters & Ether will sometimes give Relief, but when it appears to be an Affection of the Parts within the Cranium all our Efforts will in general prove ineffectual. Stimulants are also indicated in Flatulences, Acescency, Spasms of the Alimentary Canal which are commonly owing to Weakness & Oftentimes produce Costiveness & Indigestion. They act here by exciting the Action of the Stomach & Intestines & thus promote the Digestion of the

Aliments

Aliments & expulsion of the Faeces. These Symptoms Flatulences Spasms &c. frequently accompany Hysteric & Hypochondriac Diseases — Stimulants are therefore frequently indicated in these. They act here principally as Antispasmodics. They have also been employed for the Cure of the Gout. Of their Use in this Case I shall treat when we come to speak of the Case of Bitters —

Stimulants are hurtful wherever the Actions of the Heart & Arteries are too vigorous. Hence they are improper in all Haemorrhages, Inflammations & Fevers arising from this Cause.

Particular Stimulants.

These are very numerous of which D^r^ Cullen has a great Variety. I am not to treat of all he mentions but shall confine myself to those which deserve to be employed in Medicine.

Melissa or Balm I should not mention this were it not the Substance most generally employed in this Country in Infusion or Tea as a common Drink for the Sick. Its Virtues are very inconsiderable & happily for the Patient, for as it is given indiscriminately in every Case if it were

possessed

possessed of much Efficacy it would do Injury. A Physician whoever who pays any Regard to rational Indications will prescribe it only in those Disorders that are attended with Langour & Debility.

Lavendula or Lavender in Infusion may be employed in those Diseases owing to Pituita Frigida, that is such that are attended with Languor & Debility & in Cases of Head Ach when attended with or owing to Languor. It is also recommended in Tremors of the Extremities, Paralytic Affection of any Part of the Body, a Dimness of Sight and Dullness of Hearing.

Marjoram is possessed of some Acrimony with an agreeable Odor. It is useful in all Cases of Langour & Debility hence it has obtained the Name of a Powerful Cephalic. It is useful in Infusion in Pituitous Asthma & Catarrh when it is not attended with a Fever as it promotes Expectoration & is possessed of a gentle Antispasmodic Quality. It is the strongest & most Powerful of the Class to which it belongs if we except the Marum Verum or Syrian Mastic which has been highly

recomm

recommended in all those Disorders in which the others of this Class have been employed.

Hyssop & Penny Royal agree prettymuch in Virtues. The latter expells Flatulencies and is a Powerful Antispasmodic. It will promote Menstruation when this is obstructed by a Spasmodic Affection of the Uterus & it is generally employed by the Woman in their Pedelwia to bring on this Discharge when it is obstructed. Both the Hyssop & Penny Royal are serviceable in Disorders of the Breast when they are not attended with Fever.

Of the Mints there are a great Number many of which are employed in Medicine. Pepper Mint is the Best. Its Action is more considerable and sooner extends over the whole System than any of the others—

Pepper Mint Water may be employed with Advantage in Vomitings, Hiccoughs, Cholics and all Diseases arising from Flatulance or Indigestion or Distension of the Abdomen with Air contained in the Intestines. Hence it has obtained the Name of Stomachic or Carminative. Pepper Mint will relieve

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an Obstruction of the Menses when it is owing to a Spasm of the Womb or Alimentary Canal.

Sage in many Cases is a good Remedy. It was highly esteemed by the Antients. Besides its Stimulant it is possessed of an Astringent Quality it affords a Concretion Similar to Camphor. Van Swieten recommends an Infusion of Sage for those Night Sweats which follow & often attend other Disorders & are owing to Debility. It has been recommended in Tremors Palsies, Fluor Albus &c. Sage has been used with the good Women as Balm as a drink for the Sick but as this is a more Efficacious Remedy we should be cautious not to give it when there are Symptoms of Inflamation. We should confine its Use to those Fevers that are attended with Languor & Debility. Sage has been recommended as to prevent Abortions when they have become habitual & nothing is more common than for the good Woman to prescribe red Sage for this Intention. Its Use is frequently attended with Success in this Case.

Another Set of Stimulants is comprehended under the Title of Umbelliferæ of these are the following Anise, Caraway, Fennel, Cumin, Coriander Wild Carrot & Candy Root. The part of these generally

employed

employed & in which their Virtues principally re-
side is the Seed. Of the following only the Roots
are employed — Angelica, Burnet Saxafrage, —
Sovage & Italian Heartwort. These are all Car-
minative or Antispasmodic assist Digestion relie-
Head Ach arising from Crudity dispell Flatu-
lence & cure Colics & other Disorders arising from
Flatulences. —

Angelica has been accounted Alexiphar-
mic & has been highly extolled in Contagious
Dis~~eases~~eases it however answers no better than
any other Stymulant & Diaphoretic Medicine
the Antients had a great Opinion of Alexiphar-
mic Medicines which they expected would prevent
Poison & Contagious Miasmata from producing
any bad Effects in the Body. We now know that
no Medicine is properly Alexipharmic & those
Substances which were most extolled by the Antients
in this Intention were in General possessed of
very little Efficacy or are wholly inert —

Anise & Fennel are the most Powerful &
most agreeable of this Class. Tea of these Seeds
is a very excellent Medicine for Children who

from

from the Asceseency of the Milk are afflicted with Flatulences & Grapings. They are much preferable to the pernicious Spirituous Liquors generally given by the Nurses in these Cases.—

The Wild Carrot has been much recommended in Calculous Concretions of the Kidneys & Bladder. Its Use however in these Cases seems doubtful for it neither disolves the Stone in nor out of the Body nor are its Diuretic Virtues considerable appearing to be only casual. We have however convincing Testimonies of Relief being obtained by the Use of this Medicine. It may perhaps act as an Antispasmodic mitigating the Pains arising from the Stone or Gravel which appear evidently to be of a Spasmodic Nature & we know that the Symptoms of the Stone may often be relieved by Opium & other Antispasmodics.

The next in Order are the Siliquosæ. Of these are Mustard, Radish Horse Radish all the Nasturtiums & Scurvy Grass. All these are employed for the Cure & Preservation from the Scurvy. They are the only Stimulants that can be employed with Safety in this Disease, for as

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I observed before when we were upon this Disease. Nothing is proper but such Substances as are liable to undergo a Fermentation in the Stomach & be converted into our Fluids. These Substances tend to encrease the Evacuation by Sweat and Urine while at the same time they correct the Tendency of the Fluids to Putrefaction.—

Mustard Seed is very serviceable in Paralitic Afflictions. The Dose is from two to four Table Spoonsfull of the Seed unbruised a Day so as to keep the Body gently open. In this way I have found it one of the safest & most Efficacious Remedies that can be employed in this Case. It never exites a Sensation of Heat in in the Stomach nor is there any Danger of Inflamation being exited. By being given unbruised the Stomach extracts its Virtues slowly & thus the heat & Inflamation are prevented which would be produced were we to give the same Quantity bruised. Mustard when bruised & given in the Quantity of ℥ss or ℥j in Powder or Infusion affords us an excellent

Emetic

Emetic. Its Action is confined principally to the Stomach & is not extended over the System. It is particularly serviceable when we want to evacuate only the Contents of the Stomach without affecting the Rest of the System. We may give the Patient a weak Infusion to drink to carry the Operation to what Length we please for in the above mentioned Dose it seldom produces more than one Evacuation unless it is encouraged.

Mustard Whey affords an excellent Remedy in Lethargy ~~Coma~~ serous Apoplexy & in all Cases of Languor & Debility. It is of great Use in the last Stages of Nervous Fevers in which there is a great Loss of Sensibility. It is carried in the Intestines and proves purgative, some part will enter the Circulation & will prove a Powerful Stimulus to the Whole Body. It increases the Secretions by Urine & by Sweat & solves the Spasm upon the Surface.

Mustard is some times applied externally to excite the Action of the Heart & Arteries which it does more powerfully & more effectually produces a Derivation of the Fluids from the part affected

affected than Blisters. We may in many Cases employ Sinapisms with good Effect when our Patient will not suffer us to apply Blisters tho' the paen arising from the latter is not so great as from the former. We must not tho' in all Cases substitute Sinapisms for Blisters. In Cases of topical Inflamation & Inflamatory Fevers they by their great Stimulus will evidently prove hurtful.

Horse Radish is possessed with simular Virtues with Mustard. It is employed infused in Beer with Mustard as a common Drink in Dropsies owing to Languor & Debility & Obstructions of the Viscera from Sluggishness. Here by its Stimulus it may act as a Diuretic. It may answer very well in this way as a common Drink for the Patients as it will tend to remove the intolerable Thirst with which persons in this Disease are generally tormented & will also pass quietly out of the System. It has been recommended

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in coughs Hoarseness & particularly in the humoral Asthma. It is to be given made into a Syrup with Sugar. All the Siliquosa are recommended for removing hoarseness & giving a clear tone to the voice. Agreeing with the Siliquosa in Virtues are the Garlic, Onion & Leek. Garlic has been recommended for the Cure of Worms which it is said to destroy even when applied to the Navel or Soles of the feet. However this may be it destroys worms when given internally & if persisted in for a certain length of time it will generally relieve persons troubled with them. Garlic proves a powerful diuretic & diaphoretic. It appears in its sensible Qualities to approach very near to Asa fœtida. The Catarrhus Senilis a disease incident to old age in which from the Diminution of the natural Evacuations the humors are thrown upon the Lungs. In this Case all that can be done is to alleviate the Disease for we cannot entirely remove it. This is to be done by increasing the Perspiration by some Diaphoretic. Garlic & Asa fœtida are the best Substances employed for this purpose. Their

constant use is attended with this disadvantage that they render the breath & perspiration very offensive but this is an Inconvenience that must be put up with. The Garlic should be taken Morning & Evening & swallowed whole for then its Virtues are better extracted & it will more effectually prove diuretic & diaphoretic Garlic has been recommended for the Cure of the Stone but it certainly can have no Effects in this Case. Boild & roasted Onions have been highly recommended for promoting the Maturation of boils or Abscesses but I can have no Idea of their superior Efficacy for by boiling they are deprived of their Acrimony & converted into a mucilaginous Substance. Any simple & more agreeable Mucilage will answer equally well.

Coniferæ. Under this are comprehended the Fir, Pine & Juniper. The Virtues of these are nearly the same & are owing to the Turpentine they contain & will therefore be greater or less in proportion to the Quantity of

this Turpentine The fir & pine tops are often em-
ployed in diet drinks for sweetning & purify-
ing the blood An Infusion of them proves diu-
retic & diaphoretic hence are servicable in
the Scurvy. This has also been found very use-
ful in Eruptions & foulness of the Skin which
were thought to be owing to a Scorbutic ha-
bit of body. These eruptions are generally ow-
ing to an obstructed Perspiration by which the
matter which should be thrown off this way
stagnates under the Skin becomes acrid & by
its Stimulus produces inflamation hence
Pimples Ulcers &c are produced independant
of acrimony or Impurity. As this is the case
no Medicine will tend to remove them but
such as increase the perspiration & have a
tendency to the Superficies. For this pur-
pose an Infusion of the fir tops will an-
swer as well as any thing else. By this re-
medy the late Lord Chancellor Norrington
was cured of Eruptions in his face with which
he had been troubled for many years & for which

which he had tried a variety of Remedies to no purpose. It is of no consequence which Species of the fir we employ as they are all possessed of similar Virtues. We in general choose the Shoots of one Year when they are about a finger's length.

The Wood of Berries of Juniper agree in Virtues with the Pine or Fir. They are much employed as diuretic & Carminative. An Infusion of Juniper Berries or Oil of Juniper may be given with advantage in Flatus or Colics owing to Flatulencies but where there are any inflammatory Symptoms we ought to refrain from the Use of this disorder. This may likewise be serviceable in the pituitous Asthma when unaccompanied with fever. Van Helmont strongly recommends the Rob a certain preparation which he kept a Secret as a powerful diuretic in the Dropsy. We do not however trust to this remedy alone for the Cure of this disorder. The Rob may serve as a convenient Vehicle for diuretic Medicines with which it corresponds

responds in virtues we should always have this in view never to add any Medecine to a prescription which does not correspond in Virtues with the principal Medecine.

An Infusion of Juniper Berries has been recommended in the Nephritis Gin Calculous Concretions of the Kidneys & Bladder but as these are generally attended with Inflamation this Medecine from its Stimulus is certainly highly improper. A Spasm of the Bowels will sometimes so much resemble the Nephritis as to deceive both the patient & physician. In this case an infusion of Juniper berries will most effectually give Relief & probably from some such Cause they at first tho' improperly obtained the Reputation of being serviceable in the Nephritis. ——

Balsams These got their Name from their agreeable Odor & their Property of resisting Putrefaction both Internally & externally. They may be defined resinous oily Bodies odoriferous of a Consistence between an Ointment & a Liniment or a Resinden

Oil

Oil. They are either Native or Artificial. They are also divided into the Liquid & dry. Of the Liquid are Balsam Copaibæ the Balsams of Peru Tolu, Canada & the various Turpentines.

Balsam Capaibæ has been much employed for stopping Gleets of Urinary Passages whether owing to a Veneral Cause or not. It has been commonly supposed in this Case to Act as an Astringent. It is however possessed of no such Property for when given in a sufficient Quantity it affords a most excellent Laxative. It is evidently a Stimulus & has a particular Tendency to the Urinary Passages, as appears from its imparting to the Urine of Persons who take it a smell resembling Violets & a better Tasted from its agravating Gonorrhœa Gleets are generally owing to Debility & Stimulants by giving Tone to the parts & by exciting an Inflamation & Constriction of the Mouths of the Glands of the Urethra will often cure them. Canthardes are often found Effectual as curing a Gleet & probably would much oftener be so were not their Effects so uncertain for a certain Dose will produce very different Effects in different Persons

Riding a long Journey on Horseback has also been found to stop a Gleet. In these Cases this Effect is certainly produced by the Irritation given to the Urethra by which an Inflamation is produced which causes a Constriction & thus stops the Mouths of the Glands. Balsam Capaiba may act in the same Manner. It ought not to be given while there is any Inflamation remaining. From its Tendency to the Urinary Passages it has this Advantage that it will exert its Effects without Stimulating the rest of the System. It has been recommended in the Fluor Albus. In this case it may act by its communicating the Irritation to the Uterus from its Contiguity to the Urethra & even when this Disorder is owing to a general Relaxation it has been cured by a long continued Use of this Medicine. Combined with Sal. Tart. it is recommend in the Pituita Frigida, the Pituitous Asthma as also in glandular Swellings & Obstructions. We need scarcely repeat the Observation that we should be careful not to use it where there are febril Symptoms.

The Balsam of Peru is applied externally when a Nerve Tendon or the Periosteum has been injured

It is used internally from 20 to 40 Drops in a dose for the Cure of the Colica Pictonum. Sydenham & Hillary, the latter of whom practised Physic for many Years in the Island of Barbadoes bestow great Encomiums on it in this Case. The latter particularly recommends it for the Cure of the Palsy which is frequently the Consequence of this Disease. It is likewise recommended in Consumptions & Ulcers of Lungs but on Account of the Feber & Inflamation generally attending these Cases it appears to be improper. In the Pituitous Asthma it is employed not improperly for by its Stimulus it will prove Diuretic & also promote Expectoration.

The Balsam of Tolu is possessed of similar Virtues & is employed in the same Diseases with the Balsam Peru.

Turpentine has much the same Virtues. It is strongly recommended by D.r Pitcairn in the Sciatica when given in large Quantities & persisted in for a Length of Time. It may be very serviceable in Cases of habitual Costive-

ness

ness owing to a weakened Peristaltic Motion occasioning Flatulencies & Spasms. It is often used in Cases of obstinate Costiveness in Glysters where it is better than Salt - here it acts as an Antispasmodic. Turpentine combined with the Yolk of an Egg has been found very serviceable in Ulcerations of the Intestines when it can be applied to them. A Fumigation of Turpentine has been found serviceable in relieving the Pain arising from Hæmorrhoides Cæca or blind Piles. Gum Guiacum is possessed of similar Virtues with the Balsam we have just mentioned. It is particularly recommended in Arthritic & Rheumatic Cases. In the former it is said to be an useful Remedy. In the latter particularly in the Chronic Rheumatism, it has even been supposed a Specific. Dr. Pringle in his Diseases of the Army mentions the Use of it with Approbation. It acts by its Diaphoretic Qualities. We should however be cautious to use it where there is Inflamation. By being mixed with the white of an Egg becomes Soluble in Water as it also does when mixed with the Mucilage of Gum Arabic. Zij dissolved in Zvj of

Water

Water with Gr. iij or Gr. iv. of Tart: Emetic will afford us an elegant & efficacious Remedy - a Table Spoonful of this may be taken every 2 or 3 hours: or which answers equally well it may be rubbed very fine with Nitre & a small Quantity of Tart. Emet. added.

Myrrh is an Exudation of some Vegetable substances ~~collected~~ collected by certain Insects & by them hoarded up in the hollow Trunks of Trees in the same Manner as Wax is collected & hoarded up by Bees, whence it is brought to us in the Grains in which we see it. It was the Substance principally employed by the Antients for embalming & preserving their dead Bodies from Corruption. Taken in large Quantities. Myrrh Stimulates the Stomach & the System in General. It affects the Urinary Passages in the same Manner as the Balsams. Externally applied it resists Putrefaction & hence it is used in foul & sordid Ulcers and to prevent & cure Gangrene. When given internally it will not cure putrid Disorders on Account

of

of its stimulating & heating Qualities - It has been reckoned Emmenagogue but it has no particular Virtues this Way acting as all other Stimulants Boerhaave placed the Cause of many Disorders in what he termed Spontaneous Gluten & inert Fibre & in these Disorders he particularly recommended Myrrh, but as we do not Know that this Cause exists we can not be certain of the good Effects of the Medicine.

Gum Benjamin has generally been reckoned Pectoral. The Saline Substance called the Flowers of Benjamin has been thought remarkably so. It We appears to be rather Hypothetical in the common Dose of Gr. ij to Gr. iv. we must give it in Doses of Gr. xv or Gr. xx to produce any Effects & even in this Dose its Effects are inconsiderable.

We are next to consider some of the Woods employed in Medicine.

Guiacum this ever since it was brought into Europe has been thought Efficatious in Venral Cases. Warm water employed in the same Manner will produce the same Effects of which the Italien

Physicians

Physicians are so well convinced that they often times use nothing else in these Cases

Sassafras has been employed in the same Manner & in the same Intention as Guiacum. The best Method of using it is in Infusion. A continued Use of it may be serviceable in the Cachexi & Fluor Albus. It may also be serviceable in Blotches & Eruptions of the Skin where it acts as a Stimulant increasing the Perspiration.

Sarsaparilla was used for the same Purposes & in the same Manner as Guiacum with which it was frequently combined. It was for a long Time neglected untill M^r. Fordyce again introduced it into Praitice on the following Occasion. M^r. Kennedy had done great Service in Venereal Cases by what is called the Lisbon Diet drink or Kennedy's decoction the Preparation of which he kept a Secret — Many Conjectures were formed concerning this & amongst others it was supposed to be only a Decoction of Sarsaparilla. This was therefore

tried

tried & found to be serviceable particularly in Chronic Venereal Complaints where Mercury had been previously given. When Mercury had not preceded, its Use did not answer so well. Where a Salivation had been employed without Effects, where there were Ulcers pain in the Bones &c. Sarsaparilla was found Serviceable. There is no doubt however but that the Sarsaparilla is much inferior to the Lisbon Diet Drink. I have it from good Authority that the Lisbon Diet Drink or Kennedys Decoction will in a short time cure all Venereal Complaints, whether Mercury has preceed its Exhibition or not.

The Cortex Mezereon or Spurge Laurel ~~approaches~~ approaches nearest to the Lisbon Diet drink in Virtues. It is found of great Service in removing Venereal Exostoses & pains in the Bones — Take a Spurge Laurel & Liquorice Root each ℥ij slice & boil them in ℔ iij Water untill only ℔ ij remain, let the Patient take this Quantity every 24 Hours & in Six Weeks he may expect a perfect Cure —

Radix Contrayervæ has been reckoned Diaphoretic & Alexipharmic & has been much recommended

mended in Contagious Diseases arising from Putrid Miasmata. It is also given in Nervous Fevers to support this Vis Vitæ & promote Sweat It is in these Cases given ℈r to ℈ss every two or 3 Hours. It may however be given to ℥j with out any Sensible Effect. Hence it appears of little or no Use except it be to trifle with.

Lecture 17th

We have now finished those Stimulants which could be ranked according to Botanical Analogy. The former are ranked together in Sensible Qualities.

Aromatics are certain Substances which join to an acrid pungent Taste a fragrant Odor of an agreeable Kind. Hence they remarkably affect our Organs of Taste & Smelling. They are all possessed of an Essential Oil specifically heavier than Water. They are in general Productions of Torrid Zone & agree in Medicinal Virtues as much as in sensible Qualities.

Cinnamon is the most agreeable. It grows naturally only in the Island of Ceylon from whence it is brought by the Dutch. It is said when too great a quantity has been imported, the East India Company order a great Quantity of it to be burnt that the price of this Valuable Article may not be lessoned. It is the best Cordial Stimulant in all Cases of Debility & Langueor. Autumnal Intermittants are frequently attended with these. The Oil of Cinnamon is one of the

99 best Remedies we can employ in this Case, A single drop is sufficient for a Dose. We should always prefer the Oil which arises towards the End of the Process. Cinnamon is frequently added to Purgatives to prevent the Spasms arising from their Use. Thus it is very properly added to an Infusion of Senna. It is also added to Rhubarb to increase its Purgative Quality & sometimes to increase its Astringency. When we add Cinnamon to Decoctions with a view to increase their Purgative Qualities we should not put it in 'till towards the End of the Decoction, but when we want its Astringent qualities we should add it at the Beginning & let it remain the whole Time. Cinnamon is the safest & most agreeable Stimulus to lying in Woman when they require the Use of such Medicines. It is a very good Carminative & is therefore Useful for Children who are troubled with Griping & Flatulences. When a Suppression of the Menses is owing to Spasm or Relaxation or Flatulence in the Alimentary Canal, Cinnamon is a Safe & efficacious Remedy.—

Cloves

Cloves are most acrid & Stimulating. The Oil is sometimes added to stimulating Medicines but as it is highly acrid we should be cautious not to be too free in its Use. It is sometimes employed in the Tooth Ach. A Drop is put into the hollow Tooth to destroy the Sensibility of the Nerve. Cloves are useful in Paralytic affections of the Tongue when the Patient is able to chew them. They are also employed internally in Colics Vomiting & Hiccoughs. They are usefully applied to the Stomach of Infants that are troubled with Flatulence. A weak Infusion or Tea may also be given in these Cases when they are not attended with Fever.

Nutmegs are the Fruit of a Tree a Native of the East Indias upon which they are said to grow in the same Manner as our Hickory Nuts here. It is said that they all put in Lime Water in order to prevent their germinating. In their first recent State they are possessed of a Narcotic & Stupefying Quality. Bontius who practised Physic many Years in the East Indies observes that those Persons who use the recent Nut freely were often affected with

with an Apoplexy. Hoffman relates the Case of a young Woman who upon taking a large Quantity of Mace to promote the Menstrual Discharge was seized with a Délirium that continued several Hours. From this Narcotic Quality and their Astringency Nutmegs are useful in Diarrhœas & Dysenteries. They are also useful in Relaxation & Debility of the Stomach.

Mace is possessed of the same Virtues & is a Production of the same Tree growing round the Nutmegs in the form of a Net work.

Pepper when finely powdered will cure Hiccough. It is employed by the Country people for the Cure of Intermittents. A Table Spoonful of unground Pepper is taken in a Glass of Rum half an Hour before the Fit comes on which it often prevents by keeping up a constant & most disagreeable Warmth which it communicates to the Stomach. If however it has not the Effect of putting off the Fit the Patient is sure to suffer for his Temerity when the hot Fit comes on. From this we see that it is an ambiguous & even dangerous Remedy & we ought therefore never to prescribe it for this Purpose

Serpentaria

Serpentaria Virg: or our common Snake Root is a powerful Stimulant with an Aromatic Flavor. It powerfully resists Putrefaction and hence is employed in Malignant Fevers. In the Beginning of these Fevers where there is an Inflamatory State, Stimulants are hurtful but in the Decline when the Constitution has become weakned & the Powers of Life are low Stimulants are necessary & here Snake Root is one of the best Remedies we can employ. It is also an excellent Preventative against Contagious Disorders. It is generally hurtful in Vernal Intermittents, on Account of the Inflamatory Diathesis which generally prevails in these. But in Autumnal Inter & Remittents it is one of the best Remedies & I scarce ever omit prescribing it in these. Likewise order it in all Nervous Fevers where it proves it an excellent Remedy. It is hurtful only where there are Inflamatory Symptoms. Provided the Fever is of the Intermittent Kind we may use Snake Root Tea in the Intermission with Advantage. It is highly useful for the Nausea which generally attends Autumnal Remittents. We often times can not give the Bark on Account

of

of the Nausea which it excites. In this Case I have found nothing preferrable to give the Bark in than a Cup of Snake Root Tea which will often be retained in the Stomach when every thing else is rejected by Vomiting. Strong Snake Root Tea is one of the best Remedies for the Violent and Langnerous Hiccoughs which sometimes occur in Remittent Fevers. In one Case of this kind in which I prescribed this it operated like a Charm.

Ginseng is a Root in great Esteem among the Chinese. This they employ for preventing & curing all Diseases & think it conduces to prolong Life. They formerly procured it from Tartary & the Chinese valued it so highly as to give treble its weight of Silver for it. It was found to grow very plentifully in this Country & was some Years ago a valuable Article of Commerce but from being carried to China in very large Quantities and some of it probably being of an inferior Quality the Chinese came to consider it as a fraudulent Imposition & therefore did not value

our

our Ginseng near so highly as that of Tartary. Notwithstanding the great Esteem in which it is held by the Chinese Ginseng is possessed of little or no Virtues. It may serve as a safe guard and agreeable Masticatory to Persons who require such an Amusement & is much preferrable in many Respects to the nauseous Herb Tobacco.

Cascarilla has been employed in putrid & Malignant Fevers, but is by no Means equal to the Peruvian Bark – Dagner employed it in the Dysentery. Besides its stimulating it is likewise possessed of an Astringent Quality & Narcotic [illegible] it may therefore probably prove serviceable in Chronic Dysenteries.

The next Sett that agree in sensible Qualities are the Bitters. Of these the first is

Wormwood. This with Worm seed & many other Bitters has been reckoned very serviceable for Persons troubled with Worms. This Virtue seems to be ascribed to Bitters upon no good Foundation for Worms will live a considerable Time in these Substances out of the Body without showing any uneasiness. A long continued use

use of Bitters may however be giving Tone to the Intestines prevent the Generation of Worms. Wormwood has always been esteemed for its Diuretic Virtues & hence it has frequently been employed in the Dropsy. Its Diuretic Virtues may be considerably increased by combining it with Sal. Tart. ℥ij or ℥ss of Sal. Tart. dissolved in ℥viij of an Infusion of Wormwood affords us one of the best Remedies hitherto discovered in the Dropsy for the Cure of the Dropsy. Wormwood has been used for the Cure of the Jaundice. It can have little or no Effect in removing the Obstructions on which this Disorder depends. It may however from its Bitterness prove serviceable to Persons afflicted with the Jaundice, supplying the Place of the Bile. A Decoction of Wormwood with an addition of a large quantity of common Salt is applied externally in Gangrenes. A long continued Use of Wormwood affects the Eyes with an uneasy Sensation of

dryness

dryness, Contraction Weakness & Inflamation attended with a Head Ach as also a singing of the Ears & Giddiness. These Effects seem to depend on its Narcotic Qualitys.

Cardwus Benedictus was formerly employed in those Cases in which the Bark is now given. It may still be used with Advantage in some Cases. Thus in the beginning of Intermittents when we cannot give the Bark we may give our Patient a cold Infusion of Cardwus which will often produce a distinct Intermission & thus give an Opportunity of exhibiting the Bark. —

Camomile Tea was the Substance most generally employed when we now give the Bark before this last was discovered. It is a powerful antiseptic & resists Fermentation of every Kind. It may often be used with Advantage in Intermittent & Remittent fevers & probably would be useful much oftener were it not so apt to prove purgative. It is very useful to work off a Vomit with as it does not relax the Stomach so much as warm water

& some part of it will be taken into the System & prove Diaphoretic & Diuretic. —

Tansy is said to preserve Animal bodies from Putrefaction. Woman employ it for the Hysterics & they also use it in Pediluvia to promote the menstrual Discharge. In the German Philosophical Transactions it is recommended in Dropsy. It may act as a Diuretic in the same manner as Wormwood. The seeds of Tansy are reckoned good against Worms but they will act no better than any other bitter.

Orange Peal contains a large Portion of Essential Oil. It appears to be heating & stimulating & is very useful in Spasms & Flatulencies arising from Indigestions when the Complaints are not attended with fever.

Centaury Minor & Gentian agree very much in Virtues. They are both pure bitters are Species of the same Genus. Gentian & Orange Peal are the principal Ingredients in what is commonly called Stoughton's Bitters & which is so much employed to strengthen the Stomach

By

By a long continued use of this as well as of all other Stimulants the Tone of the Stomach is destroyed. The Root of Gentian is employed by the Surgeon in Fistulous Ulcers to keep them clean & to prevent the Lips from growing together. An Infusion of Centaury will answer the same purposes as Camomile Tea. Centaury & Gentian are employed for the Cure of Intermittents. The Dose is ℥ss every half hour or hour. They are much inferior in this Case to the Peruvian Bark.

Columbo Root is a strong & pure bitter & a powerful Stimulus. I have found it particularly useful in checking bilious Vomitings which attend Remittent fevers particularly in the case of a Lady in whom the Stomach was very irritable who was relieved by this Remedy when several others had failed. She has not had a return of her complaint since which is now about a Year. Since that time I have given it frequently for checking Vomitings. The manner in which I generally employ it is to infuse ℥ss in about ½ pint of water boiling hot. After this has grown cold 1, 2 or 3 tablespoonsful of it are

to be taken every 2 or 3 hours. It is also said to be a powerful antiseptic but I have never had an Opportunity of experiencing its effects in this way.

Peruvian Bark is so much employd in Medicine that it will deserve a particular Attention. — This was first made known to the Governor of Laxa who by his entreaties & friendly Offices obtained from the Natives a Knowledge of the Remedy with which they cured their Intermittents. He communicated it to the Spanish Viceroy the Count De Chincon whose Lady was dangerously ill of an Intermittent 1638. It was brought into Europe by the Count De Chincon in 1649. The Jesuit brought a Quantity of it to Rome Hence it obtained the Name of Jesuits powder or Bark. It was sold by these fathers at an exorbitant Price. Six were in general sufficient to perfect a Cure. It was afterwards neglected untill Sir Robt. Talbot again employd it with great Success in 1679 tho' he kept it a Secret it was only known under the name of the English Powder. Lewis XIV purchased

the Secret for a Premium of 2000 Guineas & likewise allowed Sir Robert an annual pension of 100 Guineas during his Life. Since that time it has been universally known & generally employed sometimes with & sometimes without propriety. Good bark may be known by its weight Freshness Brittleness & shining appearance when broken. The best method however to judge of its goodness is by making a Decoction of it in Rain Water. For this purpose ℥ij or ℥iij may be boiled in Rain water. The decoction is to be poured into a clean Glass. If it appears red while warm but upon cooling turns white or pale & deposites a Sediment we may conclude that the bark is good but not otherwise.——

Bark has been employed in a variety of disorders & has generally been supposed to act by some Specific Property.

It is manifestly a bitter combined with astringency with some degree of Aroma. From these Qualities I think we may explain its Virtues in all Cases in which it proves serviceable.

It is useful in those Diseases in which there

is a genral or partial Debility, but it is hurtful in those that are attended with Rigidity, Plethora, Fever & Inflamatory Symptoms. In Vernal Intermittents in which there are gen-erally Inflamatory Symptoms the Bark commonly proves hurtful. In the autumnal in which some degree of putrescency & Debility take place from the first Invasion Bark proves a useful Remedy. When Obstructions are owing to Relaxation & Debility by which the Solids are unable to propel the circula-ting fluids whence they stagnate the bark by giving Tone & thus thickening the Solids proves very serviceable; but when these de-pend on rigidity or a too vigorous action of the Solids or upon Plethora the bark is injurious. The best method of exhibiting it is in Substance from ℥ss to ℥j every 2 or 3 hours or oftner according to necessity. When given in infusion or Decoction it does not answer so well as when given in Subst-ance as it is more apt to run off by Stool or Urine & defeat our Intention. The Bark

is

is indicated in all Periodical Spasmodic Affections which depend on Mobility & Irritability of the System It acts here by restoring Tone to the System & taking off Relaxation on which Mobility & Irritability generally depend. When there are Inflamatory Symptoms we should avoid the Use of the Bark until these are removed. Thus the Chincough which is evidently a Spasmodic Disorder may frequently be cured by a judicious Administration of the Bark. In the Beginning of the Disorder when there are Inflamatory Symptoms or during the Paroxysm the Bark is highly improper; but in the latter End of the Disorder on those Days when the Disorder is moderate it proves a valuable Remedy. The Bark is a usefull Remedy in Periodic Colics which return in Stated Periods. In Epilepsies which depend on Mobility & Irritability the Bark may sometimes be of Service by taking off by Relaxation on which these depend & restoring Tone to the System. It is of the greatest Service in Gangrenes that are owing to Relaxation & Debility of the Solids.

In

In this Case when there is eminent Danger we should pay no Regard to the Quantity We may give it in as large Doses & as often as the Stomach will bear. From ʒ ss to ʒ j may be given every ¼ or ½ Hour. We may also apply it in Fomentation externally at the same time. It is not a Specific in this Case but acts by Strengthning & restoring the Action of the sound Parts, whence an Inflamation & Suppuration are brought on by which the Mortified parts are separated from the sound. When Gangrene is owing to Inflamation & increased Action of the Heart & Arteries the Bark is certainly improper & acidulated, diluting ~~Drink~~ drinks are the best Remedies. I formerly explained how Inflamation might be occasioned by Relaxation & Debility of the Solids as well as by their increased Action. In the former Case the Bark may be employed with Advantage; in the latter it is evidently improper. The Principal & most general Use of the Bark has been for the Cure of Intermittent Fevers.

In

In these it has also been supposed to be specific. Its Virtues however depend on its Bitterness Astringency & Aroma & were it possible to make a Combination by Art in which these Properties would exist in the same Perfection I doubt not but it would prove equally Effectual in the cure of Intermittent & Remittent Fevers as the Peruvian Bark. Bitters & Astringents have at all Times been recommended for the Cure of these Disorders & I have known a Mixture of Galls & Gentian cure an Intermittent in which the Bark had been tried to no Purpose which probably was owing to an Inferior Quality of the Bark.

Various Opinions have been formed concerning the Proximate Cause of Intermittent Fevers. The most Antient Opinion is, that the Disease is brought on by a Morbid Matter lodged in the Body & that the Cure consisted in evacuating this Morbid Matter. This Opinion appears to be ill founded if we attend to the following Considerations. The Fit may be prevented & the Disease often

often cured without any Evacuation. Thus we may often prevent the Fit by giving Anodynes a short Time before this used to return. These certainly do not produce any Evacuation but rather lessen & perhaps intirely suppress the usual Evacuation — The Disease is not to be cured by Evacuations alone. Bleeding & purging will never cure the Disorder & indeed are frequently hurtful. Emetics indeed frequently perform a Cure without the Assistance of any other Remedy; but that they do not act by merely evacuating the Contents of the Stomach is evident from this Consideration that they will answer as well if not better when they do not produce vomiting as when this is excited. The Bark does not increase any of the Evacuations & yet perform the Cure. Another Opinion is that the Cause consists in an Accumulation & Lentor of the Humors in the extreme Vessels of the Skin — This is certainly false for the very Reverse takes place. The Blood is driven from the superficies & is accumulated in the Viscera — A third Opinion

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is, that the Disease is a Nervous Affection with a Spasmodic Constriction of the extreme Vessells on the Skin & hence the Cause is placed in the Nervous System. This Opinion appears to be the most probable & several Circumstances tend to confirm it. The Medicine employed to cure the Disease are all of an Antispasmodic Nature. Affections of the Mind will often cure the Disorder & will as often produce it. Nervous Diseases are often known to become Intermittent & Vice Versa. I knew a Gentleman afflicted with a Periodical Colic which returned every day at a particular Hour. One Day on which the Colic used to return he was attacked with the Fit of an Ague & no Symptoms of the Colic appeared. The next day the Colic returned when he was freed from his Intermittent. The Disorder continued in this Manner changing from Colic to Intermittent to Colic untill a Stop was put to it by proper Remedies. Some have endeavored to place the Cause in an Inertia in the Nervous Fluid, but this is difficult to determine. The regular return of the Paroxisms has at all

Times

Times afforded great Matter for Speculation.
Many Opinions have been formed to account for
this but none of them are Satisfactory. In a
late Publication on this Subject it has been
attempted to account for it from Habit. It
is observed that Custom or Habit has a great
Influence on the Animal Economy in many
Cases & it is supposed that its Effects may
be extended to the regular return of Inter-
mittents. However Specious this may appear
at first sight it will appear to be false if
we consider that in Order to any Thing becom-
ing habitual it must have continued for
some Considerable Time & therefore that
Habit or Custom can have no Influence
on the first ~~two~~ or three Paroxisms. These
~~two~~ are in general the most regular & the
Return of the Fits afterwards becomes more
irregular — whereas if this Return depended
on Custom or Habit the longer the Disorder
lasted the more regular should the Paroxisms
become till at length their Return should be
as regular as the Motions of a Clock —

The

The Bark should not be used for the Cure of Intermittents until we have restored the Determination of the Fluids to the Skin. We generally premise Emetics to the Use of the Bark to produce this Determination to the Surface which they will more effectually do if a Dose of Laud. is given after they have operated. This produces an universal Relaxation of the Body, increases the Circulation & hence powerfully promotes Diaphoresis and Sweat. This is seldom perfectly produced after the first Fit & hence it is customary to let the Patient have 2 or 3 Fits before we give the Bark. It is also very useful to premise Neutrals or Emetics as Diaphoretics. These will certainly contribute much to shorten the Disease & to render the Cure more certain. In general we may observe that the Autumnal Intermittents are more tedious & more difficult to cure than the Vernal. The Autumnal are generally attended with Debility & Putrid Symptoms. The Vernal with Inflamatory Symptoms and may frequently be cured by Bleeding & the Antiphlogistic Regimen without the Use of any other Remedy. The Bark is best calculated for Autumnal Intermittents

As soon as a Person is seized with a Fit of an Intermittent he should be put to Bed. During the cold Fit he should ~~obtain~~ abstain from Drink as much as possible, for every Thing he takes will tend to increase the Weight, Oppression & Restlessness. If however he has an Inclination to vomit he should encourage by drinking warm Water or Camomile Tea. By this vomiting the Fluids which were before accumulated in the Viscera will be determined to the Surface & by this the Paroxism will be greatly relieved. During the hot Fit the Patient may drink acidulated diluting Liquors. He should also take a Solution of Sal: Amm: or some Neutral Mixture which will tend greatly to produce ~~more~~ a Diaphoresis & shorten the Paroxism. The Head Ach which is often very troublesome may be much relieved by throwing a Veil over the Face which confining the Heat a Perspiration is produced there which greatly contributes to the Removal of the Head Ach. During the Intermission the Patient should avoid all Food that is liable to ferment in the

Stomach

Stomach as ripe ascescent Fruit, Milk, Cabbage
all Food that is difficult of Digestion as Fish, Salted
Meats, Cheese in a word every Thing that tends to pro,
duce Refrigeration as it is termed. His Diet should
consist principally of Animal Broths with Vegetab,
le Substances well boiled. If the Patient is troubled
with Flatulencies & Pains in the Back & Loins we
may give a gentle Purgative. We may flatter our,
selves with the hopes of speedy Recovery of our
Patient if the 5th Paroxysm is neither longer
nor more severe than the preceeding ones, if the
Urine seperates & deposits a latcritious Sediment
if the succeeding Paroxysms become milder if
about this time Eruptions appear about the Lips
or Nose If these appear earlier in the Disease
it is a Sign that it will be tedious. If the Parox
ysm is very severe attended with Bleedings from
the Nose Vomitings Diarrhœas with Evacuations
of Blood, Pain of the Œsophagus with cold Sweats
& Stupor & if the cold Fit is not succeeded by the
hot & sweating Stages we should never delay ad,
ministering the Bark, & by all Means prevent

another

another Succession.

In this Case little Regard is to be had to the Quantity but as much as the Patient can Swallow I have known ℥ss taken in less than an Hour - If the Stomach can not retain enough to prevent another Paroxysm we are then to administer it in Glysters. Jord. ~~er~~ from ℥ss to ℥j may be given every 2 or 3 Hours. From the Observation of D.r Cullen it appears that the nearer we give the Bark to the Time at which the Paroxysm is expected the better. Doctor Home contradicts this. In my own Practice I follow D.r Cullen's Advice. I generally begin about 6 Hours before the Paroxysm is expected so that from ℥iv to ℥vj may be taken before its Accession & this Way I find more effectual than that of giving the Bark at longer Intervals. If the Patient does not take this Quantity it will seldom put off the Fit - & this Quantity seldom fails.

After we have prevented the Paroxysm of an Intermittent the next Thing we are to do

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is to prevent a Relapse. For this purpose the Patient should take a few Doses of the Bark for a few Days after the Fever has left him — On the 7th or 8th Day he should take 5 or 6 Doses of Bark as Relapses more frequently happen on the 9th Day than at any other Time. Persons inhabiting a low Marshy situation are more liable to Relapses than any others. For these therefore a change of Air is necessary or if this is not practicable they should at least confine themselves to the upper Stories of the House. Relapses are also more common in Autumn than in the Spring. Every Thing that tends to weaken & enervate the Body disposes to them & should therefore be avoided. —

Intermittents resemble other Disorders as, Periodical Rheumatisms. Intermittents attaking the Face &c. ~~at~~ are all to be cured by the Bark. Tissot's account of this Species of Intermittents is so excellent that from it you can never be at a Loss to know it when you meet with it. On account of his Judicious Observations on this & many other Subjects I would

recommend

recommend his Book to you as worthy of a constant Perusal. "The same Cause" says he "which produces these Intermittent Fevers frequently also occasions Disorders which return Periodically at the same Hour without Shievering, without Heat & often without any quickness of Pulse: Such Disorders generally preserve the Intermissions of Quotidian or Tertian Fevers but much seldom those of quartans. I have seen violent vomiting and Reachings to vomit with inexpressible Anxiety; the severest Oppressions, the most racking Colics; dreadful Palpitations & excessive Tooth Aches; Pains in the Head & very often an unaccountable Pain over one Eye, the Eyelid Eyebrow & Temple of the same side of the Face; with a redness of that Eye & a continual involuntary trickling of Tears. I have also seen such a prodigious swelling of the affected Part that the Eye stood out above an Inch from the Head covered by the Eyelid which was also extremely inflated or puffed up. All these Maladies begin precisely at a certain Hour

Hour, lasts about the usual Time of a Fit, and terminating without any sensible Evacuation & return exactly at the same Hour the next day or the Day after."

"There is but one Known Medicine which can effectually oppose this Sort which is the Bark. Nothing affords Relief in the Fit & no other Medicine ever suspends or puts it off. But I have cured some of these Disorders with the Bark & especially those affecting the Eyes which happen oftner than the other Symptoms, after their Duration for ~~many~~ Weeks & after the ineffectual Use of bleeding, Purging, Baths, Waters, Blisters & a great Number of other Medicines. If a sufficient Dose be given, the next Fit is very mild, the 2.nd is prevented & I never saw a Relapse in these Cases which sometimes happens after the Fits of * common Intermittents ~~[illegible]~~ seemed cured."

Vide Tissots Advice to the people page 285 6 of the London Edition 1765" or Pages 144-5 Philad.a Edition 1771.

Lecture 18th

The Bark has been unjustly accused of changing Intermittents into Dropsies, Jaundice & other disorders owing to Obstructions of the Viscera. It is so far from producing these Disorders that by curing the fever which by continuing a long time produces them it is the principal means of preventing them, & when they are produced Nothing is more powerful in removing them than this Remedy. —

The Bark is employed with the greatest Advantage in all Intermittent & remittent fevers that are accompanied with a putrid Diathesis. Dr Cleghorn in his Treatise on the Diseases of the Island of Minorca gives an Account of Intermittents that prevailed there with evident Symptoms of Putrefaction. When the bark was not given at the first Intermission or Remission the Patient generally died. He therefore carefully watched the time of Intermission & when the Bark was then given he found it would succeed in Cases that were deemed desperate In these Cases the Bark acts as a powerful Antiseptic. Whether it is useful also in putrid Fevers that are without Intermission is doubtful

ful. It may indeed in these act as an Antiseptic in the Primæ viæ but as it does not enter the circulation it does not extend its antiseptic Effects over the System. Dr Hillary in the yellow or bilious fever of the Westindies trusted the Cure principally to acidulated diluting Drinks & condemns the use of the heating & stimulating Medecines which are commonly employed as antiseptics. We had a remarkable Instance of the Inefficiency of these Medecines the last time the yellow fever was imported into this Country. A whole Family was seized with this disorder part of which was put under the Care of an eminent Physician of this City who treated them as usual with giving the Bark & other Medicines that are supposed highly antiseptic. All of those however under his Care died while the remaineng part of the family who had no Medical Assistance but were left to shift for themselves & who had used Nothing but fruits & other accescent Substances recovered. In the beginning of putrid fevers if we employ the bark it will generally prevent their

further

for the Progress. It may also be of great Service to preserve healthy Persons from the Contagion. After the putrefaction has advanced & has entered the Circulation Vegetable Acids with acidulated diluting Drinks are chiefly to be relied upon. They may be accompanied with the use of the Bark Here it will answer best in Infusion especially in Wine as we want only its antiseptic Qualities with its stimulating ones. It proved serviceable in the Camp Fever which was common here some time ago which I always considered as a Nervous Fever attended with a greater degree of putrefaction than usually accompanies these fevers. In this I used the Vinous Infusion & Decoction of Bark & found it prove more serviceable than any other preparation.

When putrefaction is confined to the primæ viæ the Bark may prove a valuable Remedy but when this enters the Circulation & the fluids of our body become affected those Medicines whose action is confined

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to the primæ viæ will not answer so well as those which enter the Circulation & prove Antiseptic there.

Bark is indicated in Hæmoptoe & the Hæmorrhages. When these are owing to an increased action of the Heart & Arteries the use of the Bark is dangerous but when they are owing to Relaxation & Debility the Bark is a safe & useful Remedy. It is employed to prevent the periodical Return of Hæmorrhages which it does by giving Tone to the System & stringhening the Relaxed Vessels.

Bark is an excellent Remedy for persons of a weak & feeble Constitution & for weakness of any particular part. Chewing to the Quantity of ℥ss a week will be sufficient in these Cases. Used in this way it is highly serviceable to Persons that are very subject to Inflammations in the Throat when exposed to cold Air.—

The Bark is employed in bad Ulcers to produce good & laudable Pus. It acts here by giving Tone to the Vessels & producing that

Degree of Inflamation which is absolutely necessary for the formation of good pus. The Bark probably from observing its good Effects in Ulcers is employed in the Small Pox to make the pustules fill & bring the Disorder to an happy Issue. We should in this disorder employ it immediately after the Eruption of the Pustules. It can only be employed with safety & Advantage when the Constitution is so much debilitated that Nature is unable to struggle with the disease & would be in danger of sinking in the contest. Then it will raise the pulse, give Tone to the System & produce a degree of Inflamation proper for the formation of Pus. In this case some Physicians employ Wine even when there is a Delirium. If Petechiæ & purple Spots appear we are to have immediate Recourse to the Bark. When there is an Inflamatory Diathesis or when the action of Heart & Arteries is too vigorous the use of the bark is entirely highly improper & the Antiphlogistic Regimen & even Bleeding become necessary. The Bark has been used by some in the Suppurato

ry fever but its use here seems rather doubtful
This is brought on by the Pus being absorbed &
carried into the System. The best method is
to carry it off by gentle purgatives & to employ
acid & antiseptic Drinks.
The Bark has been employed with success in
Scrophulous Sores & Ulcers. These are generally
owing to Relaxation & Flaccidity of the vessels
of the Part & universal Relaxation of the System
in general. The Bark by removing the partial
Relaxation & giving Tone & Strength to the Sys-
tem in general often proves a valuable Re-
medy. But as this Disorder is sometimes not
to be cured by any medicines whatever, no
Wonder that the Bark sometimes fails.—
The Bark has been said to cure cancerous com-
plaints & if we could trust to the accounts gi-
ven by Physicians it has even cured real can-
cers. Probably however an Ulcer of a bad qua-
lity may have been mistaken for a Cancer,
& in this the Bark would prove serviceable
but it is doubtful whether it can succeed

in a single case of real Cancer.

On account of its Efficacy in Ulcers some have thought of extending the use of the bark to internal Ulcers & they have accordingly recommended it in Consumptions. In these however it must certainly prove hurtful on account of the Inflamatory State which almost always accompanies them. It has likewise been recommended in Nephritic complaints but in these it will answer no better than any other more simple & less stimulating Astringents.

The Bark has been highly extolled for the Cure of the Gout but we shall have Occasion to speak more particularly of the Medicines employed in the Gout by & by.

In the Rickets if accompanied with a proper Regimen & the use of the cold bath the Bark may be employed with great Advantage. In this Disease the greatest Relaxation takes place which extends even to the Bones which become soft & flexible.

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the Patient can never expect to recover perfectly at least with Regard to Shape or Figure, but by a proper Use of Astringent Medicines with the Cold Bath & by living on solid Animal Food with a high dry & cold Air the Disorder may be considerably relieved.

We come next to treat of the Pharmaceutical Treatment of the Bark.

I have already observed that we should give it in Substance if possible & in as large Quantities as the Stomach will bear. When the Patient either will or can not take the Powder we must give it in Infusion in Water or Spirituous Tincture. By cold Water we can best extract the Astringent Virtues of the Bark but not its Bitterness. By boiling Water it loses its Astringency. By Brandy or any Spirituous Menstruum we extract the Bitterness but not the Astringency. A vinous Infusion is the weakest of all & has little more than the Virtues of Wine.

With Regard to that Species of Bark which has lately been introduced into Practice it appears from some Experiments made by Dr. Kentish that the red Bark as it is called is a stronger Bitter than the Common pale colored or Quill Bark—

that

that it is not so powerful an Astringent and a weaker Antiseptic. It likewise appears from him that the two are not of the same Species as was at first supposed tho' of the same Genus. There are four Species of Bark in South America. From its being a more powerful Stimulant the red Bark is preferable in Autumnal Intermittents & perhaps in no other Case Wherever we want the Astringent or Antiseptic Effects we must prefer the common Bark. It is said that a Species of Bark has lately been discovered in the Island of St Lucia.

A Root has lately been discovered in the Island of Surrinam & Vincents which is said even to excell the Bark in the Cure of Malignant & Remittent Fevers. I mean the Radix Quassiana so called from a Negro Man named Quassi who first discovered its Virtues. From him it is likewise called the Quassi Bitter. It is the strongest & purest Bitter in Nature. It has been employed with great Success in all Putrid & Intermittent

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and Remittent Fevers. D.r Warner a gentle Man of extensive practice in the Island of Antigua assures us that he has employed it with Success in these Cases even where the Bark has failed. He likewise observes that the Patients retain it better on their Stomach than the Bark. In the Countries in which it is found the Inhabitants use it as a preservative against the dangerous Remittents so common there. It may be given either in Substance or Infusion. The Dose in Substance is from ℥ß to ℥j. It yields its Virtues readily either to Water or Wine. When used as a preservative a Vinous Infusion is generally preferred.

Acorus Verus our common Calamus is a Stimulant & Astringent. It approaches in Virtues to the Peruvian Bark & was formerly employed in those Cases in which the Peruvian Bark is now employed. On Account of its Stimulus it is employed to excite the Appetite & assist Digestion. It is useful in Colics & Flatulencies arising from Indigestions or

from

from Air. It may be useful in the Catarrhus Senilis & Asthma Pituitosa by its Stimulus promoting Expectoration. Fallopius tells us that he employed a Decoction of this in thin Wine for a Suppression of Urine & assures us that he never failed of Success. In Paralytic Affections it may be of Service. It may be given combined with Steel in a very relaxed State of the Stomach & in this Way it proves effectually Stimulating & Strengthning.

Chemopitys or Ground Pine with some other Bitters form the Gout Powder commonly called the Duble of Portlands Powder the Composition & Method of using it is as follows — Take the Roots of Birthwort & Gentian, the Tops & Leaves of Germander, of Ground pine and Centaury each an equal Quantity, reduce them into a fine Powder. Of this ~~is to be taken~~ ʒj is to be taken every Morning fasting & nothing is to be taken for an Hour & an half after it. This Course is to be continued for three Months — After this ¾ of a

Drachm

Drachm is to be taken for three Months longer. During the next Six Months ℥ ß is to be taken every Morning. It will then be sufficient to take ℥ ß every other Morning. This Course is to be continued for two Years, without Intermission in Order to Obtain any Benefit from it. The Recipe & Method of using it were Published by the Duke of Portland after he had by the Use of it been freed from a painful hereditary Gout. It was after this used by several Persons & it generally proved Effectual in preventing the painful Returns of the Gout in Inflamation of the Extremities. It is by no Means a newly discovered Medicine. Bitters have a long time been employed for the Cure of the Gout even by the Antients. They distinguished the Gout in the Sanguineous, Bilious & Pituitous from the Nature of the Fluids which they supposed produced the Disorder. In the Sanguineous they used the Lancet freely. In the Bilious they also bled & in all used griping stimulating Purges, especially the Pituitous. After this they put the Patient upon a Course of stimulating Bitters which they generally gave made into an Electuary with Honey. Of this ℥ ß or the Size of a Hazle Nut was to be taken

every

every Morning. This Course was to be continued for a Year. Every 2 or 3 Months a Purge was to be given. They generally chose to begin the Course Spring or Autumn. For Persons of a cold Phlegmatic Habit of Body the Spring was preferred. For those of a hot dry Bilious habit they chose the latter End of Autumn. They did not however administer these indiscriminately to every Constitution. They allowed them to be hurtful to those of a hot bilious Habit and supposed them to be serviceable principally to those of a Phlegmatic Habit. They also employed them in recent Cases of the Gout & thought them unsafe after 5 or at most 7 Years after the first Attack. In Italy a Gout Powder was famous a long Time under the Name of the Pulvis principis Mirandle. The Composition of which was analogous to that of the Duke of Portlands Powder. It was observed that almost all who used the Duke of Portlands Powder in England tho' they were freed from the painful Appearance of the Gout in the Extremities were afflicted with more fatal Disorders than the Gout. Many died Apoplectic as did the

Duke

Duke of Portland himself a few years after he had been freed from the Pain of the Gout. D.r Cullen observes that the same Thing happened to 12 Gentlemen who were all that used it in Scotland. D.r Gaubius observed simular Effects in those Persons who used it in Holland. Coelius Aurelianus observes that those Persons who in his Time used the Bitters Electuary for the Cure of the Gout were generally seized with Lethargy Stupor & Apoplexy or Pleurisies & Peripneumonies By the use of Bitters the Tone of the Stomach is destroyed & it seems as if it was rendered incapable of throwing the Gout upon the Extremities and thus it falls upon other parts, as the Brain Lungs & Bowells. ~~This likewise~~

A Person some time ago appeared in England who undertook to cure the Gout radically. The Terms were that the Doctor should receive 300 Guineas one half of which was to be paid at the Beginning of the Course & the other half at the Expiration of a Year at which time the Course was to be compleated. Amongst others the late Marquis of Granby put himself under his Care but before the Expiration of the Time appointed the Marquis died Apoplectic. From this Circumstance & from the Length of Time necessary to perfect a Cure it is probable his

Medicines

Medicines resembled the Duke of Portlands Powder.

The natural & salutary appearance of the Gout is in the Extremities in a Topical Swelling & Inflamation. Nothing therefore should be attempted to remove this unless we could at the same Time intirely radicate the Disorder. This is not to be done by Medicine. Some thing of the kind may be done by a proper Use of Exercise & a Strict Regimen, as a Milk Diet. This may sometimes cure the Disorder but it ought only to be attempted on young Persons & those of a Strong & healthy Constitution. Persons advanced in Years are generally too low & weak to bear this Diet.

The Proximate Cause of this Disorder has ban long inquired after. Many Opinions have been formed concerning it but none are sufficient, for they will not account for all the Phænomena which occur. The most probable is that it is seated in the Nervous System, for where it is situated in the Simple Solids or Fluids it could not escape the accurate Inquiries made after it. This is also supported by the Disease being brought on by such Things as affect the Nervous System.

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The Substance which particularly occasions it remains as yet concealed & probably ever will — This is further confirmed from the Quick Transition of the Gout from one part to another. The following Case is so remarkable that I will give it to you as it is related in the first Volume of the London Medical Observations.

"Mr. Major Rook Surgeon & Apothecary in upper Shadwell of about 45 Years of Age a sober Temperate Man of a good habit of body & accustomed to no Disease but the Gout, the Returns of which had never been more frequent than once in 12 or 14 Months. About the Month of June 1752 he was seized with a very severe Paroxysm of the Gout. As I had known some extraordinary Effects proceeding from a Vegetable Diet in that Distemper particularly in one Gentleman who by a total Abstinance from all manner of Food except Cows Milk & that without Bread had cured himself of this Disease & who at the Time I mentioned this case to my Friend was in the 13th Year of his Milk Diet, I perswaded Mr. Rook to try what Vegetables would do for him — he readily complied & entered immediately upon it with a Resolution

that

that if it answered his Expectation he would renounce Flesh & Fish for ever. But after the most religious Abstinence from Animal Food of every kind for 11 Weeks, being visited by a gentle Attack in both Feet he returned immediately to his Animal Food. This Paroxysm continued but 48 Hours but in March 1763 was succeeded by a very severe one in both Feet. The Pain in his Feet Heels & Ancles increased with great Violence for about 10 or 12 days till at length he was in the most extreme Agoneys such as he had never felt before & such as almost made him mad. In the height of this Extremity (to use his own Expression) the Pain in the Feet Heels & Ancles flew as quick as Lightning to the Calves of his Legs but remaining there not half a Minute & not in the least abating of their extreme Violence, tho' the Feet &c were left intirely free from Pain they ascended with the same Velocity as before to both the Thighs at the same time leaving the Calves of the Legs free from there in less than a Minute & as quick as before they arrived at the Abdomen

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and after giving the Patient one more severe Twitch in the Bowells they reached the Stomach - Here the pains & here the Fit ended upon the Patients Vomiting up about a Pint & an half of a green aqueous Liquor but so extremely corrosive that he compared it to the strongest Mineral Acid. This extraordinary Crisis happened about 2 Clock in the Morning. Immediately after this Discharge he fell a Sleep & slept till 7 or 8 & awakened perfectly easy in every part, no Sign of the Distemper remaining but swelling & tenderness of the Feet both of which went off gradually so that in two Days he was able to walk about his Business.

The next Fit seized him in February 1754 in the common Way but was less Violent than the former & continued about 6 Weeks - during which Time he had three increased Paroxysms or distinct smart Fits which held him about 2 Hours each in the last of which he had the same Critical Discharge by vomiting of the same corrosive Matter preceded by the same uncommon Symptoms as in the Fit of 1753. But mending every Hour he

was

was able the very next day to walk & attend his Patients with more Ease than after the first Fit for the Swelling abated much sooner & in three Days disappeared. I have said that this last Fit was attended with three distinct Paroxysms the last of which ended as above yet to show the Disposition of Nature in this Case to throw off the offending ~~Matter~~ humour in this her new Way; it is remarkable that in the two first of these increased Paroxysms of Pain the Patient declared to me that he never had the least Ease till he had vomitted but as there was no Translation of Pain before these Vomitings there was none of that corrosive Matter to be discharged. Nothing but the common Contents of the Stomach was to be seen. These Vomitings procured the Patient some Ease but the Fit of the Gout went on till the third Paroxysm was over which ended in the Manner related. As the Crisis in this Case is uncommon I must take Notice of a Symptom or two which were no less extraordinary in both these Fits of the Gout. A most profuse

Sweat

Sweat attended the Patient every Morning during the whole Course of the Fits, which was so very offensive & at the same time his Breath so uncommonly stinking that neither the Patient himself nor those who waited on him were ever sensible of the like. His Linnen was tinged as if with Saffron & his Urine very high colored of almost as deep a Red as Claret; but upon the Critical Vomitings every one of these Symptoms disappeared with the Disease.

On the 9th of December 1755 he was again attacked in one foot the Symptoms however were so very mild that he took no Notice of them to his Family till the 12 from that Day the pain was aggravated & the Swelling greatly increased by walking & riding in a Coach. On the 17th it became extremely violent particularly in the Heel when it instantaneously left the parts affected & in the same manner & with equal velocity as in the two former fits it flew to the Calves of the Legs Thighs & Abdomen & when it reached the Stomach it caused him to vomit the same Kind of corrosive Acid as in the former fits & tho' the

Quantity was no more than a Teaspoonful he became perfectly well in two Days.

The same Symptoms of fetid Urine & offensive Sweats attended the Patient in this short Paroxysm as in those of 1753 & 1754. The Sweat continued but two Nights & the Urine fetid only 48 hours. As Mr Rook had experienced so great & happy Effects from the former critical Vomitings he was greatly disappointed upon finding so small a Quantity evacuated for which Reason he immediately attempted to increase it by drinking 3 pints of warm water which was at hand but in vain for neither that nor the use of his finger could provoke to any evacuation which was begun & ended by Nature; for tho' the Quantity was so very small, yet as it was so very corrosive & produced the same effect the discharge must be accounted as truly critical as the others were. During the first of these fits in the year 1752 a hard Tumor had appeared on the Side of the Metatarsus near the middle of

the right foot which continued untill after the 3
Vomiting when it was resolved & disappeared to-
tally upon the discharge of a viscid matter like
the white of an Egg with a few small Chalkstones
from the end of the middle Toe of the same foot.
This Discharge happened about 4 or 5 Days before
the Patient was seized with a regular fit in
1755 in April. But it is to be remarked that
this last fit continued 3 or 4 Weeks & went off
in the common Way without any of the critical
Discharges of Vomiting, Urine or Sweat, but
left on one hand three on the other two fingers
loaded with Chalkstones with this peculiar
Symptom that when the weather was cold those
fingers were affected with a most exquisite
Pain which was always removed by heat. But
not long after this last fit a large Quantity
of Chalkstones were extracted from the bot-
tom of the left foot near the Ball of the great
Toe & that from Time to Time for about 3 or 4
Months. On the 19th Jan.y 1756 the wound
occasioned by the Chalk Stone beings still open

he was seized with a fever without any symptom of the Gout came on with the common Symptoms in both feet which continued with Violence for about a week with frequent Reaching & Vomiting but without bringing up more than the common contents of the Stomach. At this Time an uncommon Aching in the Bottom of the great Toe from whence the Chalk Stones had been extracted tormented the patient for 5 or 6 hours. Upon his frequently rubbing the part he was very sensible of a Fluctuation of some Matter which soon appeared to flow at first in small Quantities from the own Orifice in the Ball of the Toe. Upon pressing the part about a Teacupful of a liquid Chalky Matter was collected. The next Morning the patient made a large Opening with an Imposthume Knife which produced more than half a Pint of Serous bloody matter full of Chalk Stones which proved as truly critical as the Vomitings of the corrosive acrid matter did in the Case above mentioned for the

the Orifice from which the Chalk Stones first issued was very soon healed & the Gentleman continues in perfect health."

I must here make some Observations resulting from the forementioned Case.

From the Pain travelling so quick it plainly appears that the Gout is a Nervous Affection for if it were carried on by means of the Circulation it would not have moved so fast. As the Vomiting of the Acid was produced immediately when the Gout arrived at the Stomach, this State of the fluids must have been instantaneously produced. This Acid could not be the cause of the Disorder as we find several Paroxysms went off without this effect being produced.

Another Gout-Doctor has lately made his Appearance in England & Ireland with surprising Success. As his Patients are upon putting themselves under his Care obliged to take an Oath never to disclose the Method he takes we are unable to discover the means

employed. This much he permits them to relate that the cure is not ~~taken~~ owing to any Medicine taken internally or externally applied. It probably is produced by Regimen & Exercise & that perhaps applied in a particular Manner.—

The next Substances we are to consider are Dandelion Endive, Lettuce & Succory.—

These have been constantly supposed to be of a cooling Nature probably for no other Reason but from our employing them as Sallads. They have been recommended for resolving Obstructions of the Liver & other Viscera of the Abdomen. Boerhaave Van Swieten & others say they have employed the expressed Juice of Succory & Dandelion are possessed of similar Virtues. To produce their Effects properly they should be taken in large Quantities & their use should be persevered in for a long time. I have relieved Jaundal Persons by ordering them to take a Coffee Cup full of the expressed Juice of the Dandelion 2 or 3 times a day.

Lecture 19th

Indian Turnip in its recent State is very acrid & when taken in large Quantities it is even said to prove deleterious. Stockelin gives a Case of a Vomiting of blood produced by it. Dr. Storck tells us of a boy afflicted with a violent Cardialgia from eating it of which he died. Vinegar is said to be the best antidote when it has been taken & that it will even destroy its Acrimony. It looses its Acrimony by drying & boiling & roasting & is then employed as food by the Natives of this extensive Continent. When taken in a moderate Quantity it stimulates the Stomach excites Appetite & promotes Digestion & proves serviceable where the Peristaltic motion is inert & languid. On Account of its diuretic Virtues it is employed in Dropsies & on account of its pectoral Virtues in the Asthma Siluitosum. It is likewise employed in Paralytic Affection both internally & externally. It is sometimes employed in Intermittents when fresh from gr x to gr xx in Pills at a Dose. It has Vir-

tues only when fresh.

Masterwort affords a good Masticatory for the Rheumatic Toothach. Hoffman tells us he employed it in Paralytic Affections. This Root powdered is said by Country people in Europe to cure Intermittents. Mixed with Hog's Lard it will cure Ringworms. It is a very acrid Stimulus & may be employed wherever such are required.

All the kinds of Iris are very acrid. The Acrimony resides principally in the Root. The Florentine Iris is a very strong Errhine, not only causing Sneezing when taken into the Nose but also Inflamation of the Nose & Head. Internally taken it proves a very strong Cathartic. Iris used as an Hydragogue. On this Account it is recomended in the Edinburgh Essays in the Dropsy & was used with Success. The root is to be macerated in cold Water which the Patient is to use for common Drink. For this purpose our common Water Flag answers

veers very well. This Mr. Colden tells us he has found to be a very strong Cathartic & Diuretic —

Wine is a powerful Stimulant. The too liberal Use of it as of all other Stimulants is hurtful by enervating the System & disposing to the Stone & Gout &c. If used moderately it excites the Action of the Stomach raises the Spirits & banishes Sorrow & Care. But after the Use of it the Person finds himself relaxed & debilitated & feels all the Inconveniencies of real Disorder in proportion as his ~~Spirits~~ Spirits were before elevated by its Use. I am not however here to treat of its Use as a part Diet but am to consider its Virtues as a Medicine. Properly administered it may prove as an excellent Remedy in many Diseases. It is Useful in all Cases of Weakness & Langour. Also in Indigestion & Weakness of the Stomach & particularly in the Hypochondriac Disease. It assists digestion by exciting the Stomach into Action upon its Contents & thus we find that nothing more speedily relieves the Oppression arising from a full Meal, than a Glass

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or two of generous Wine taken after it. Doctor Cadogen thinks Wine ought not be taken ~~after~~ with Animal Food as it has the Property of hardening the Animal Substanies & rendering them firm resisting Putrefaction; but it by no Means follows that it has this Effect in the Body. It is an excellent Medicine & Cordial where the Strength has been exhausted by — Chronic Diseases. It is also excellent in some Fevers —

Fevers are divided into 2 Kinds.
1st Those that are attended with Languor and Debility 2d Where the Actions of the Heart & Arteries is too vigerous & exceeds the Standard of Health.

Under the former we comprehend all the Nervous Malignant & Putrid Fevers. Here Wine is an excellent Remedy as it resists Putrefaction, excites the too Languid Motion of the Heart & Arteries & increases the Strength of the Patient. Claret is particularly serviceable in those Cases. Where Miliary eruption appear

Wine

Wine properly administered so as not to heat the Body is one of the best Medicines we can employ. It is also highly Useful to take off the Restlessness attending those Diseases & for this Purpose it particularly recommended by Doctor Gilchrist. A Delirium & Redness of the Eyes are no uncommon Symptoms in Nervous Fever. These are occasioned by a weakened Circulation. Wine therefore by increasing the Circulation will be of Service in these Cases. The best Method to know when Wine will prove serviceable is to know whether the Heat & Delirium are increased. If they are it is to be continued no longer. Wine is also very useful in the last Stage of an Inflamatory Fever in which the Patient is generally weak. In the Begining of Inflamatory Fevers the Use of Wine is improper on Account of its increasing the Action of the Heart & Arteries which is already too vigorous. Wine is also employed with Advantage in the Smallpox. Here it acts much in the same

Manner

Manner as the Bark. With Regard to the Quantity little will generally be sufficient but such persons as have been nused to a large Quantity in common must take more of it than a person who uses sparingly or none at all in common Diet. Dr Whytt used to tell us of a Case of an Officer labouring under a Malignant Small Pox who took Seven Bottles of Claret a Day & was by this cured of his Disorder. The Wine should generally be given in a weak Negus or in a diluted Form. It acts by supporting the Vis Vitæ as an Antispasmodic & Antiseptic. Burgundy Claret or Rhenish Wines are the best Antiseptics. The heating Wines as Madera, Port, Sherry &c are the best preservatives against Contagious & Epidemic Fevers. Of the Usefulness of Wine in Contagious Disorders there was a remarkable Instance during the Plague at Marseiles when all the Physicians of that Place being dead

it

it became necessary to order a fresh Supply from Paris. Those thinking fear was the Cause of contagion determined to keep themselves always gay & cheerful with Wine. This they did & by those means preserved themselves & as many others as they could prevail on to pursue the same method Their Preservation however depended more on the Antiseptic Virtues of the Wine than their high Spirits.

Malt Liquors are more nutritious accescent more laxative & flatulent than Wine. They are very proper for the Cure of & preservation from the Scurvy. Where there is a Debility of the Organs of Digestion they are extremely hurtful causing Flatulencies, Spasms & the whole Train of Evils attending Indigestion & accescent Fermentation in the Stomach.

Animal Stimulants. Those are but few as Animals are made up of mild bland Substances & are themselves of a mild nature. Some of the secerned Fluids are however of an acrid & Nature, but those shall be mentioned

under the head of Evacuants. The most power-
ful of the animal Stimulants are the
Cantharides. These are commonly employed in
external Applications. From their Acrimony
they stimulate & inflame the Skin, & in conse-
quence of this raise Blisters. I shall here
only treat of their Operation & Use when taken
internally. The Antients & Hippocrates sup-
posed the Acrimony to be lodged in the
Head, Wings & Feet & accordingly deprived
them of these that they might be given with
more Safety. But this is a wrong Notion
as the Acrimony is found to be lodged in
one part as well as another. Cantharides
were employed for internal Purposes before
they were used externally tho' by many
they were considered as dangerous & im-
proper for our Frame. Hippocrates employ-
ed them in Hydropic Cases & as a Pessary
to promote the menstrual Discharge they
are found to have a particular Tendency
to the Urinary Passages & even occasion a
Discharge of Blood from these parts with

great Inflamation. Dr. Grainger in the Edinburgh Med. Ess says recommends a Combination of Cantharides & Alkaline Salts in the Dropsy. He likewise recommends them in inveterate Gleets. Groenveldt employed them in Ulcers of the Kidneys & Bladder, in the Gout & in Calculous Concretions of the Kidneys. He always combined Camphire with them. In large Doses they are very hurtful & will even prove fatal by exciting a violent Inflamation in the Oesophagus Stomach & Intestines. They will also occasion bloody Urine, Strangury & Erection of the Penis. Forrestus gives us a Case of a person who from taking a large Dose of Cantharides with a View of exciting the Venereal Appetite, had a continual Erection of the Penis a Swelling of the Scrotum & a discharge of Blood which destroyed the Patient on the 11th Day. In moderate Doses they do not affect the Stomach & Intestines but stimulate the Urinary Passages only. This seems to be owing to them being kept in a diffused State before they arrive in the urinary passa

ges where from their Connection with a particular part of the blood they are in a manner concentrated & thus act more powerfully. This seems to be confirmed from their not always affecting the kidneys when given in a dilute form whereas Crys in Substance will sometimes produce a Strangury. But even in Substance they do not always prove diuretic & when they have this Effect it is more by Chance than Design. In Nephritic Cases they must be hurtful on account of the Inflammation they excite. They are said to be useful sometimes in stopping Gleets & the fluor albus which they do by exciting an inflamation in the parts, but their effects here are doubtful as we cannot determine the degree of Inflamation. On account of their Diaphoretic Qualities they have been supposed diuretic & since they have been recommended by Dr Mead in the Leprosy. I can expect no great Effect from them in this case. They have also been supposed Expectorant & therefore have been employed

employed by Barton & Lettsom in the Chincough.
Barton always combined Bark, Camphire &
Opium with them to prevent their bad Ef-
fects which were certainly of more Service
than the Canthorides. They are at best a pre-
carious & in many cases a dangerous Remedy
& indeed they should never be used when we
can get any other Remedy to answer the pur-
pose.

Millepedes have been employed for various
Disorders. Dioscorides employed them as Diu-
retics in the Dropsy & in Obstructions of the
Viscera Jaundice &c Boyle says that the
use of them will sharpen & clear the Eyesight
& will remove the first Symptoms of Cata-
ract, They have been recommended in Sup-
pressions of Urine & in Constriction of the
Kidneys owing to Calculous Concretions,
where they are supposed even to dissolve
the Stone. These Insects contain a Ti-
mulus of the same undetermined Nature
as the Canthorides to which however they

are much inferior in Power. I have seen them exhibited in Chlorosis & Scrophula without any considerable Effects. They are given in Substance from 3ss to 3ij in a Dose or the expressed Juice of 50 or 60 animals is swallowed in a Glass of Wine. In Lougnervous Fevers their good effects are certainly only those arising from the Wine in which they are given.

Cochineal possesses no great effects as a Medicine its only use being to give an agreeable Color to our formulæ.

Vipers have been employed for the cure of many disorders Your Rattle Snake for the same they deserve no Preference to any other Stimulant. The fatty ingredient in Sir Hans Sloan's Ointment. Any other Oil will answer full as well

We now proceed to the general Characters.

Nutrientia as Stimulants. Whatever increases Motion may be considered as Stimulant. Those as adding Strength to the

Solids increase their Oscillations & as increasing the Quantity of fluids increase their Tension they are therefore by their action on the Stomach necessary in Hypochondriac Hysteric & Arthritic complaints where the action of the System is diminished & where there is too great action of the heart & Arteries as in Inflamation they are hurtful.

Astringents as Stimulants. I have in a former Lecture explained the action of these as Tonics not so much by inducing contraction but by increasing the firmness & tension of the parts. This will give a brisker action to the Vessels in the propulsion of the fluids in removing Resistances in their way & in resolving Obstructions.

Sedatives as Stimulants. These are generally in their first Operation Stimulant.

Acids. Tho' the Effects of these are sedative yet they are very probably Stimulant in their first Operation.

Alkalies are in every respect Stimulant but are not to be considered in that view alone.

Neutral Salts are both Sedative & Stimulant. Let me here repeat a caution Never be too free in the use of Stimulants lest they should become habitual to the System & at length destroy the Tone of the fibres of the whole ~~Stomach~~ System & of the Stomach in particular.

We shall in our next Lecture treat of the Cold Bath which tho' different from all other Stimulants may properly enough be brought in under this head.

Lecture 20th

The Cold Bath

Seems to have been used in Time coeval with Man. The earliest Accounts we have of it are contained in the Writings of Homer & in the Scriptures. We learn from Virgil & Claudian that it was a common practice with the ancient Italians & Germans to plunge their children as soon as born into the cold Water of their Rivers. This practice still prevails amongst some of the Northern Nations of Europe. The Russians & Finlanders after heating themselves in their Stove Rooms will plunge naked into the Snow & entirely cover their bodies with it to render them hardy. Thus far the use of the cold bath was practised only by persons in health solely to vigorate the body. The use of it in Medicine was not known untill the Time of Hippocrates who first properly distinguished the warm & cold baths & laid down some Difference between Salt & fresh Waters. The Romans who received not only their manners & laws but also Medicine from the Greeks

received with it the use of the Cold Bath. It was not however brought into genneral use until Antonius Musa at that time the first Physician in Rome cured the Emperor Augustus by the use of the Cold Bath after he had tried the Warm bath & other Remedies without Effect of a long & tedious Illness which by the Symptoms delivered us by Suetonius appears to have been of the Hypochondriac kind. For this Service Antonius Musa was raised to the Equestrian Dignity, had a golden Ring put on his finger, received considerable presents of Money from the Senate & people of Room & besides a Statue was erected to his memory & he obtained for all the Physicians an exemtion from paying tribute. From this is derived the Practice which obtains in many universities of putting a Golden Ring upon the finger of every person who receives a Doctors Degree in Medecine & to this Day in some Coune

tains Physicians are exempted from paying Taxes & from all military duty.

After this Time the use of the Cold bath became general at Rome & the warm bath which was formerly much employed was totally neglected.

Vide Horatii Epist. 15. Lib. 1. All writers both antient as Celsus, Cappadox, Strabo, Pompeius Celsus & more particularly Charmis who flourished at the time of Nero as mentioned by Pliny to whom we may add Seneca) & Modern have been full in the Commendation of Drinking.

I shall consider the cold bath under 3 heads — What waters are employed — What Choice is to be made — In what manner & how Long it is to be applied.

Many prefer Salt Water to fresh the reason of which is not very obvious. The only one that can be assigned is that the Salt will fix on the Skin & stimulate more strongly. Salt Water too may more effectually wash off the Mucus from the Skin than fresh. That

Salt does fix on the Skin appears from this that the Skin of Children who are frequently dipped in Sea water is Salt to the Taste. Dr Russel in his Treatise "De Tabe Glandulari" informs us that after his Scrophulous patients had bathed in the Sea for some time he was obliged to let them desist for sometime untill the Ulcers were healed up. ——

When we want water merely for its Coldness Spring & Pump Waters are to be preferred as they are always colder than Sea water. When we want a continual Stimulus applied Salt Water is to be preferred & in this case it must be suffered to dry on the Skin. ——

There are two Methods of applying the Cold Bath —

1st When the Person jumps into the Water. —

2dly the Shower Bath, when the Water is raised to a certain height & let fall upon the Person. There is no great difference in the Effects of

two

two Methods except that in the latter by raising or lowering the Machine we may increase or diminish the Force of Percussion at Pleasure or may add Salt when we please.

The Skin has such a Sympathy with all the other parts of the Body that whenever it is disagreeably or agreeably affected upon the application of cold Water if sudden the Vessels of its Surface are contracted & the Blood is driven to the internal Parts – Hence the external Parts appear pale, the Breathing becomes difficult, the Blood stimulates the Heart & Arteries & the Circulation over the whole Body is increased. Hence the cold & Shivering which were produced by the cold Bath are succeeded by a Glow of Heat, the Pulse becomes full & frequent, the Mind is rendered serene & chearful & if the Application of this Remedy is continued for a sufficient Length of Time the Muscles are made firm & hard & all the Functions of the Body are performed in a better manner than before & the

Person

Person is rendered much less liable to colds & Complaints arising from sudden Changes of Weather. We should not remain in the Water long at a Time, for in this Case Nature will not be able to overcome the Spasm & there is Danger of some of the Vessels in the internal parts being broken. We Know that the Application has continued long enough to succeed immediately after coming out the Body is suffused with a Glow of Heat & Redness. A proper state of the Body is necessary that the cold Bath may produce its Effects. It will be more useful if the Person is not cold when he enters.—

We are in the next place to explain how the cold Bath produces its Effects & in Order to do this properly we must make some Observations on the Nature of our Body—

The Human Body is divided by Pathologists into 3 parts The Simple Solids— The Fluids— & the Living Solids or moving Fibres. It is necessary therefore that the cold

Bath

Bath should act upon these or upon some one of them.

1st Of the Action of the cold Bath on the simple Solids.

The prevailing Opinion is that the Cold Bath acts upon the Human Frame in the same manner as the cold acts upon inanimate Bodies by constringing or condensing & thus increasing the Firmness & Cohesion of the simple Fibres. But cold externally applied can not penetrate to the internal Parts which retain their natural Heat, tho' the Surface of the Skin may be somewhat constricted & as it does not retain its heat may be condensed.—

2ndly With Regard to the Fluids the cold cannot affect them in any other Manner than in so far as it affects the Vessels upon the Skin by a constriction of them. But this Effect is owing intirely by their Sensibility therefore the Action of the Cold Bath is upon the Solida Viva or Moving Fibres.

I shall now endeavour to explain how the cold

cold Bath acts upon the Moving Fibres

That the Animal Functions may be performed in a proper Manner it is necessarily required a proper Tension or Tone of the parts, for too great Laxity or Rigidity are equally injurious. Before I proceed the Action of the cold Bath on the moving Fibres, I shall make a few Observations on this Tension & from it shall endeavour to explain some Phænomena in our System.

In the Muscular System the Fibres are kept Tense by the Weight of the Parts, by the Antagonist Muscles & by the Parts which they surround. The fullness of the Blood Vessels contributes also to this Tension of the Muscles for we observe that Muscles become relaxed from profuse Hæmorrhages by which the Vessels are emptied suddenly. Therefore the Muscular System is not only in itself Tense but also owes part of its Tension to the Sanguiferous System—

In the Vascular System there is also Tension & the Arteries are found Tense not only in the Systole but also in the Diastole of the Heart. for even after death when the action of the heart ceases the Arteries are contracted sufficiently to propel the blood. From this Tension the different Effects of blood letting can be more readily explained than from the Doctrine of Derivation & Revulsion, for it is evident that from the least change of this Tension very evident effects must be produced in our System In cases of violent Spasm Bleding relieves by the Relaxation it produces. The Antients used to bleed untill fainting was occasioned in Inflamations of the Intestines &c. The good Effects in this Case are owing to the universal Relaxation induced by which the obstruction which causes the Inflamation is taken off. But neither the extending power of the fibres or the distending power of the Sanguiferous System sufficiently account for the Distension of our Arteries To these we must add the natural Contractility which is partly to be referred to the Elasticity of the fibres but principally to the influx

of the Nervous Power This Contractility obtains only in the living body & ceases after death. The tension of the body is in exact proportion to the Nervous Influx. This primary cause of Tension varies considerably so that Tension depends on extending & distending powers & upon the Tonic Power or Contractility of the System —

There are some parts of the body in which the extending power has no Influence or if any it is very different from that which it exists in other parts. An Instance of this we have in the Stomach & Intestinal Canal to which there is no Antagonist Muscle or any counter balance The Tension therefore in this case depends upon the Contractility & Tonic power & also in some measure upon the Distension of the Bloodvessels. This part therefore is more subject to Variation than any part of the body The State of Tension in the Alimentary canal has a considerable Influence upon the Tension of the rest of the System. Thus if the

Stomach has been accustomed to take any Stimulus which increases its Tone at a certain hour when that Stimulus is denied the Stomach is relaxed & this Relaxation is communicated to the whole System, e.g. if a person has been used to take a Dram at a certain Time when that Time returns he feels a weakness over the whole body. The Palpitation of the heart shows the Sanguiferous System to be affected, the Tremor shows the Muscle in like manner to be affected. As soon as the Dram is swallowed all these Symptoms vanish & the System recovers its Tension. This debility or Absence of Tension is produced also when a person is denied his food at the usual Time. In the same manner if the Alimentary Canal is distended with a small Quantity of air the whole body is considerably affected, as soon as the Air is expelled it recovers its former State. —

But as the Stomach has a great Influence upon the rest of the body & produces various Affections so on the other hand the Stomach is variously

affected by the Affections of different parts of the body but more especially by Affections of the Surface or Skin as this the largest Organ of Sense is furnished with a great Number of Nerves which are easily irritated. Sanctorius observes how much the State of the Mind & of the Internal functions are influenced by the State of the Superficies. There is no part of the body but what may be affected in various manners by this Tension & there are many appearances which can be explained only upon this Principle Dr Whytt in his excellent Book on Nervous Disorders has a Case of a Convulsive Cough which was brought on by the least Change in the Position of the body or even by dipping the hands or feet in Cold Water This can scarcely be explained except from the Change of Tension produced. A Blister applied upon any part of the body will in a short time affect the Whole System with its Stimulus. Yet not probable y^t y^e is produced by y^e increase of Tension

We

We often see Men in Anger who at other times are weak perform Herculanean feats. This is scarcely explicable unless we suppose the Nervous influx increases the Tension. A Person makes a full Inspiration when he endeavors to lift any thing by which the Muscles are rendered tense & their force is increased. Tension suddenly relaxes the Body & causes a Person to loose his Strength tho' ever so strong at another Time as if by Charm.

It is commonly believed that warm bathing of the feet produces its Effects by Derivation, but its action can be much better explained if we suppose that it consists in taking off Tension & relaxing the part to which it is applied which Relaxation is from thence communicated to the rest of the System. We may therefore readily suppose that the cold bath acts by increasing the Tension for we know that Heat & Cold produce opposite Effects. We may hence conclude that there is necessarily a Tension belonging to the Body & when this

fevers, either on the Side of Rigidity or Laxity the body is more or less in a diseased State.

The Cold Bath is more particularly serviceable in Diseases arising from Laxity. By this the Sensibility & Irritability of the Body is increased. Woman & Children whose Bodies are very Lax have a very irritable Nervous System they are therefore more subject to the Disorders called Nervous from which the more robust remain free. The Baron Van Swieten relates the case of a young Lady who from a particular delicacy of the Nervous System was thrown into Convulsions from any Irritation. She was ordered to have her Legs Thighs & Abdomen kept tight with Bandages & was cured by these means. We seldom see strong men Hysteric or Epileptic unless they have been affected with these Disorders in their Infancy. Medicines which take off this Irritability cure the Disease. The Bellies of Muscles are more sensible than the Tens

dons because they are more Lax. The Intestines than the Coats of the Arteries. —

From what has been said it will appear how the Cold Bath acts on the Solida Viva, namely, by producing a proper degree of Tension which it seems to do by promoting an equable & just Influx of the Nervous Power. An Example will render this plain. In a Deliquio animi or Fainting where there appears to be universal Relaxation the Nervous Influx into the Vital Organs is stopped whence the whole body is affected; upon Sprinkling a little cold water upon the face or upon applying any other Stimuli the Nerves are excited into Action & the Patient is generally recovered. We can hence perceive why the Cold Bath has at all times obtained great Praise in the Cure of those Disorders which are commonly called Nervous. —

We shall next consider in what Disorders it is to be employed & in what rejected. —

In the Hysteria, Epilepsy & other disorders of this kind where there is great Debility the cold bath produces the most happy Effects. Mobility or Irritability of the Nervous System are the most frequent predisposing causes to these Disorders which are produced by the slightest occasional Causes. The Use of the Cold Bath in Hysteria may be inferred from this; that this disorder more frequently occurs in Warm than Cold Climates & Women always affected with it always find themselves better in Winter than in Summer. The Hypochondriasis a Disease so frequently confounded with Hysteria is rather a Disease of cold than Warm Climates & where it occurs the habit inclines to Rigidity. On this Account the Cold Bath seldom proves useful in this Disorder unless in the single cases where these two Diseases are complicated.

Children are very subject to Epilepsy especially if their Habit of Body inclines to Laxity, the Use of the Cold Bath is therefore very proper for them.

Palsy seems to arise from the improper Influx of the Nervous Power into the Muscels of the Part affected. The Cause of this is very difficult to explain. What ever will restore this Influx will remove the Disease. The illustrious Van Swieten has Instances of Persons afflicted with the Palsy being cured by Intermittents coming on. As the Effects of cold Bathing very much resemble the Paroxism of an Intermittent, it bids fair to be of Service in this Case. Dr. Baynard in his Appendix to Sir John Floyers Treatise on cold Bathing gives a very pretty Instance of its Usefulness in this Complaint. This Case was related to him by Dr. Blair. A Boy of 13 was seized with a Paraplegia; various Medicines were employed for it in Vain until he got something better by the Use of the Cold Bath. By the Advice of Dr. Pitcairn the Boy was plunged under a fall of Water 12 or 13 feet high repeatedly and by

this

this he recovered his former Strength and Alacrity. Le Dran has two Instances of Palsy being happily cured by Water falling from a Height on the part affected.

Madness has frequently been cured by Cold Bathing, Instances occur in Van Helmont, Floyer & other Authors.

We shall go on with this Subject, Gentlemen at our next Lecture.